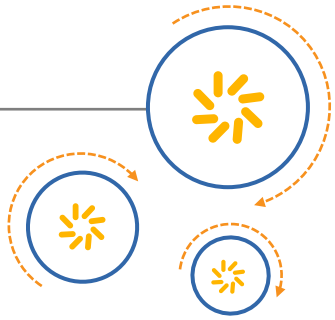
Qualcomm Technologies, Inc.



MSM8937 Linux Android Current Consumption Data

80-P2468-7 E

November 4, 2016

Qualcomm
2019-01-29 23:13:55 PST
zk_sw@wingtech.com

Confidential and Proprietary – Qualcomm Technologies, Inc.

NO PUBLIC DISCLOSURE PERMITTED: Please report postings of this document on public servers or websites to: DocCtrlAgent@qualcomm.com.

Restricted Distribution: Not to be distributed to anyone who is not an employee of either Qualcomm Technologies, Inc. or its affiliated companies without the express approval of Qualcomm Configuration Management.

Not to be used, copied, reproduced, or modified in whole or in part, nor its contents revealed in any manner to others without the express written permission of Qualcomm Technologies, Inc.

Qualcomm is a trademark of Qualcomm Incorporated, registered in the United States and other countries. Other product and brand names may be trademarks or registered trademarks of their respective owners.

This technical data may be subject to U.S. and international export, re-export, or transfer (“export”) laws. Diversion contrary to U.S. and international law is strictly prohibited.

Qualcomm Technologies, Inc.
5775 Morehouse Drive
San Diego, CA 92121
U.S.A.

© 2015-2016 Qualcomm Technologies, Inc. All rights reserved.

Revision history

Revision	Date	Description
A	July 2015	Initial release
B	December 2015	Added Power Tree diagrams in Section 2.3; updated Tables 3-1 and 4-1
C	January 2016	Updated Tables 3-1 and 4-1; added Table 4-2
D	May 2016	Added the power break down data in Section 4.4
E	November 2016	Updated Figure 4-1

Qualcomm
2019-01-29 23:13:55 PST
zk_sw@wingtech.com

Contents

1 Introduction 6

1.1 Purpose 6
1.2 Conventions 6
1.3 Expectations 6
1.3.1 Device variation 6
1.3.2 Test case selection 6
1.4 OEM platform power optimization 7
1.5 Publication timeline for power measurement data 8
1.6 GPIO configuration 8
1.6.1 Submit core modem power consumption measurement requests 9
1.6.2 Submit multimedia power consumption measurement requests 9
1.7 Technical assistance 9

2 Test setup 10

2.1 Devices used for testing 10
2.2 Air interface test equipment 10
2.3 Power tree 11

3 Test definition 19

4 Chipset current consumption 24

4.1 Commercial software release target values – Top-level 24
4.2 Battery size for MSM8937-based designs 27
4.3 Measured values – Top-level 27
4.4 Breakdown measurements (per regulator values) 27
4.5 A53 core projected Dhrystone power 122

A References 123

A.1 Related documents 123
A.2 Acronyms and terms 123

Qualcomm 2015-07-29 20:13:35 PT zh_sw@wingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

Figures

Figure 1-1 Representation of customer vs. CDP power consumption 7
Figure 2-1 MSM digital and audio-specific branches 11
Figure 2-2 MSM digital branches (CX, MPSS, and APSS) 12
Figure 2-3 MSM digital, PMIC, and external load branches 13
Figure 2-4 MSM digital, memory, WTR, camera, and connectivity branches 14
Figure 2-5 MSM digital, codec, memory, WTR, and connectivity branches 15
Figure 2-6 MSM digital, memory, UIM, SDCC, QFE, camera, sensor, display and connectivity branches 16
Figure 2-7 RF power branches 17
Figure 2-8 MSM digital, PMIC, codec, camera, sensors, and connectivity branches 18
Figure 4-1 A53 core projected Dhrystone power 122

Tables

Table 1-1 Timeline for publishing current consumption data 8
Table 2-1 Chipset ICs tested 10
Table 3-1 Test definitions 19
Table 4-1 Top-level current consumption targets for MSM8937 with PM8937 24
Table 4-2 Top-level current consumption targets for MSM8937 with PM8937 (Command mode panel) 26
Table 4-3 Rock bottom sleep with SIM (AIR1) 27
Table 4-4 WCDMA standby 2.56 sec (WS1) 30
Table 4-5 TD-SCDMA standby 1.28 sec (TCS1) 32
Table 4-6 LTE standby 2.56 sec (LS3) 35
Table 4-7 GSM standby 1.18 sec (GS1) 37
Table 4-8 WCDMA talk + 0 dBm, IMT (WT1) 40
Table 4-9 CDMA talk + 0 dBm (CT1) 42
Table 4-10 GSM talk + 5 dBm, no DTx, PGSM (GT1) 44
Table 4-11 FDD VOLTE LISTEN 47
Table 4-12 FDD VOLTE SILENT 49
Table 4-13 FDD VOLTE TALK 52
Table 4-14 TDD VOLTE LISTEN 54
Table 4-15 TDD VOLTE SILENT 56
Table 4-16 TDD VOLTE TALK 59
Table 4-17 FDD LTE Cat3 2xCA 10+10 MHz, 0 dBm, 100/25 Mbps, B1+B3 (LTE8E) 61
Table 4-18 Embedded FDD LTE Cat 3 DL + UL (68/23 Mbps) 0 dBm,10 MHz BW, MIMO Band 1 (LTE1E) 64
Table 4-19 Embedded FDD LTE CAT4 (20 MHz, 150/50 Mbps) Band 1 (LTE7E) 66
Table 4-20 HSDPA downlink 7.2 Mbps + 0 dBm, IMT (RxD) (HS22E) 68
Table 4-21 DC HSDPA downlink 42 Mbps + 0 dBm, IMT (No RxD) (HS61E) 71
Table 4-22 MP3 playback 128 kbps (Offload mode – DSP audio codec) (AU4A) 73

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

Table 4-23 H.264 720p decode, 30 fps (QTC77A) ... 76
Table 4-24 H.264 1080p decode, 30 fps (QTC88A) ... 78
Table 4-25 16 MP ZSL camera preview, 30 fps (QMC38A-1) ... 81
Table 4-26 16 MP ZSL camera snapshot (QMC55A) ... 83
Table 4-27 1080p Encode (16:9 MP sensor), 30 fps (QMC31A-1) ... 85
Table 4-28 3D Game, WSVGA, 30 fps (Egypt HD) (QGC26A) ... 88
Table 4-29 3D UI 30 fps (Graphic, power lift) (QGC23A) ... 90
Table 4-30 T-Rex, 15 fps ... 93
Table 4-31 Static Image (48 fps) (LCD04A) ... 95
Table 4-32 Browser over WiFi (WB1A) ... 98
Table 4-33 Video Streaming over WiFi (VS6A) ... 100
Table 4-34 Listen − 100% silence (AU34A) ... 102
Table 4-35 Listen - 100% speech (AU35A) ... 105
Table 4-36 Sensors - Accelerometer active 15Hz (SNS4A) ... 107
Table 4-37 Command mode − Static Image (LCD04AC) ... 110
Table 4-38 Command mode − H.264 720p decode, 30 fps (QTC77AC) ... 112
Table 4-39 Command mode − H.264 1080p decode, 30 fps (QTC88AC) ... 115
Table 4-40 Command mode − 3D UI 30 fps (Graphic, power lift) (QGC23AC) ... 117
Table 4-41 Command mode − Browser over Wi-Fi (WB1AC) ... 119

Qualcomm
2019-01-29 23:13:3 PST
zk_sw@wingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

1 Introduction

1.1 Purpose

This document provides the current consumption data for the MSM8937 chipset with AMSS 8937 software. The current consumption is highly dependent on software optimization.

1.2 Conventions

Function declarations, function names, type declarations, attributes, and code samples appear in a different font, for example, `#include`.

Code variables appear in angle brackets, for example, `<number>`.

Shading indicates content that has been added or changed in this revision of the document.

1.3 Expectations

1.3.1 Device variation

The current consumption measurements recorded in this document are not expected to match either the current consumption measurements of an OEM design or another CDP of identical part numbers loaded with an identical software.

Variations in consumption measurements when compared to the OEM device are caused by the CDP using different components than the OEM design - that is, memory ICs, display ICs, peripheral ICs, and so on. Potential variations in measurement when compared to an identical CDP loaded with identical software is caused by normal silicon process variations in both the Qualcomm Technologies, Inc. (QTI) and non-QTI components, and power supply tolerances. Any differences in the measurement technique, equipment, or temperature also cause variations. Other factors, such as floating CMOS inputs or taking measurements at maximum Tx power can affect both the reliability and repeatability of current consumption measurements.

The targets and measurements contained herein are typical values measured on a single CDP in a lab bench environment (room temperature). They are provided as a relative reference point and not as an absolute goal to attain.

1.3.2 Test case selection

The test cases selected for measurement in this document are intended to provide a wide range of coverage. Although the specific conditions required by an OEM may not appear in this list, there is a test case or combination of test cases, which suit the OEM requirement to be used for a baseline comparison.

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

1.4 OEM platform power optimization

OEM platform power optimization starts with comparisons to the QTI platform under one or more baseline test conditions provided in this document. When the OEM and CDP8937 platforms are compared and optimized in this known test case, then the differences between baseline and required test cases can be measured on the OEM platform and analyzed with QTI for optimization, if necessary.

Power optimization of an OEM platform is an iterative process that involves:

- Identifying power consumption differences between OEM and QTI platforms in similar test conditions
- Determining the source of those differences; these could be factors such as test conditions, hardware configuration differences, and software control differences
- Deciding whether the source is an error that must be corrected, or it is intentional
- Correcting errors that are identified
- Repeating until all differences are corrected or determined to be intentional

As OEMs update their hardware platforms or integrate new software releases from QTI, the power consumption may change, triggering additional power optimization. It is necessary to note that during the software development process, the current consumption for some test cases may increase, as power improvement features may need to be delayed to a later release to meet stability requirements. Figure 1-1 is an example of OEM power consumption vs. CDP power consumption.

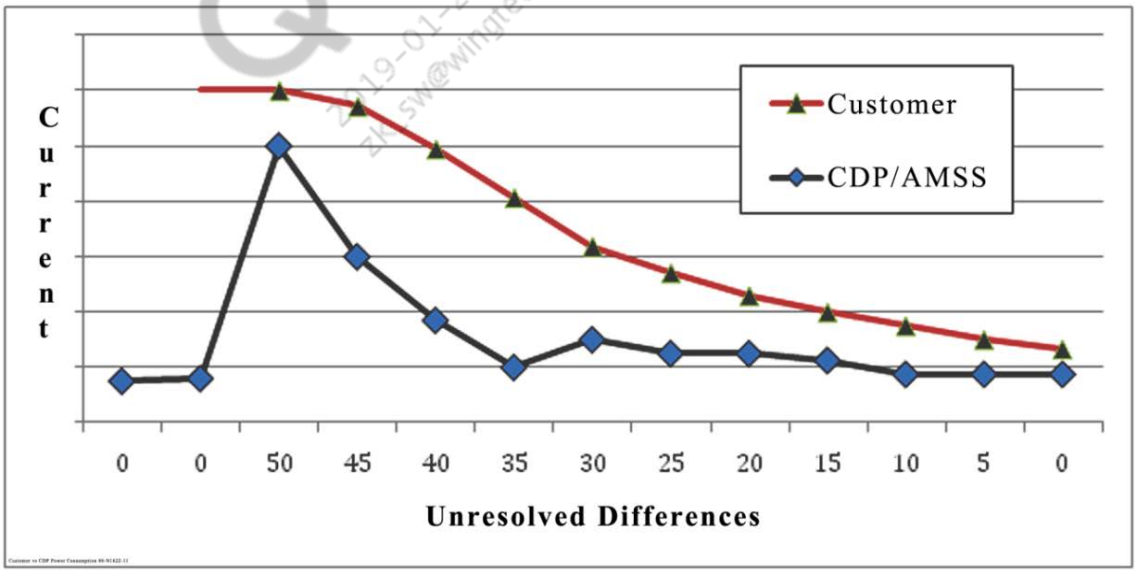


Figure 1-1 Representation of customer vs. CDP power consumption

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

When discussing power optimization with QTI, it is necessary to provide detailed information, including:

- Specific test conditions
- Available history of power measurements for these test conditions
- Goals for power optimization
- Recent hardware or software changes that may have affected the power consumption
- Power consumption breakdown per voltage rail, if possible

1.5 Publication timeline for power measurement data

This document will be updated monthly with the latest available current consumption goals. Following the Feature Complete (FC) software release, key power rail breakdowns will be included once available. The measurement of these power rail breakdowns depend upon OEM requests for specific test cases and software releases. Table 1-1 lists the publication timeline for current consumption data.

Table 1-1 Timeline for publishing current consumption data

Information provided	Guidelines for availability
Target current consumption for commercial software release	Available at the time of hardware engineering samples
Key power rail breakdowns for Table 3-1 test cases	Will be available on an as-requested basis for FC and later software releases; submit requests at https://createpoint.qti.qualcomm.com/

1.6 GPIO configuration

To minimize the current consumption, OEMs must configure any or all unused GPIOs in one of the following methods:

- As outputs in their Logic Low state
- As inputs with their internal pull-downs enabled

In addition, any GPIO pin configured as an input that is driven by a peripheral device (Bluetooth (BT), WLAN, NFC, and so on) must be programmed with an internal pull-down, whenever the corresponding peripheral signal is set to its High Impedance state. The GPIO must be reprogrammed to remove the pull-down when the peripheral signal is taken out of its High Impedance state. These steps are required to prevent unwanted oscillation or high current leakage on the device's pins.

For additional information, see *Configuration of Input Pins During Device Sleep* (80-VN499-7).

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

1.6.1 Submit core modem power consumption measurement requests

To submit a request for power measurement not currently found in this document, open a Wireless Device Support case at https://createpoint.qti.qualcomm.com/. Include the following information in the case:

- Correct chipset, AMSS software build ID, and Operating System (OS)
- Initial problem type – Software
- Problem area 1 – BSP/HLOS
- Problem area 2 – Power/Thermal (BSP/HLOS)
- Problem area 3 – OEM-appropriate selection
- Problem description – Include battery level or breakdown, and the test case

Priority is given to standard test cases, as listed in Table 3-1, and the measurements are provided within a week. Requests for nonstandard test conditions are evaluated on a case-by-case basis.

1.6.2 Submit multimedia power consumption measurement requests

To submit a request for a multimedia power measurement not currently found in this document, open a Wireless Device Support case at https://createpoint.qti.qualcomm.com/. Include the following information in the case:

- Correct chipset, AMSS software build ID, and OS
- Initial problem type – Software
- Problem area 1 – Multimedia
- Problem area 2 – Power
- Problem area 3 – Customer appropriate selection
- Problem description – Include battery level or breakdown, and the test case

Priority is given to standard test cases, as listed in Table 3-1, and the measurements are provided within a week. Requests for nonstandard test conditions are evaluated on a case-by-case basis.

1.7 Technical assistance

For assistance or clarification on information in this document, submit a case to Qualcomm Technologies, Inc. (QTI) at https://createpoint.qti.qualcomm.com/.

If you do not have access to the CDMATech Support website, register for access or send email to support.cdmatech@qti.qualcomm.com.

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

2 Test setup

2.1 Devices used for testing

The following hardware and software configurations are used for measurements:

- The MSM8937 and PM8937 devices, installed on a specially-configured CDP8937 Resistive Current Measurement (RCM) evaluation platform for power measurement purposes only
- Various MSM8937 AMSS software releases as defined throughout this document, along with the current consumption data being presented
- Display resolution with memory configuration used are 1080p DSI with 2×1 GB LPDDR3s; Video mode panel, Portrait mode panel orientation
- The current consumption measurement is performed using the QTI Kratos power measurement system on the CDP-RCM (or RCM) platform

Table 2-1 lists the chipset's devices used on the CDP8937 power measurement platform for each set of tests.

NOTE: Throughout this document, the phrase *MSM8937 chipset* refers to the combination of devices listed in Table 2-1.

Table 2-1 Chipset ICs tested

QTI IC
MSM8937
PM8937
WTR2965
WCN3680B
PMI8952
WCD9326
WSA8810

2.2 Air interface test equipment

Chipset current consumption is measured with the MSM8937 platform configured for an air interface operating in a specific mode. The tested modes are defined in Chapter 3. The test equipment used to emulate the air interface are:

- Most CDMA measurements – Agilent 8960 *Wireless Communications Test Set*
- Most LTE measurements – Anritsu MT8820C

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

- Most WCDMA measurements – Agilent 8960 or the Anritsu MT8820C *Radio Communication Analyzer*
- Most GSM measurements – Agilent 8960 or Anritsu MT8820C

2.3 Power tree

The current consumption numbers listed in the power tree are estimated worst-case currents. These numbers are preliminary and are intended for PCB routing reference only.

- The total peak branch current from regulator (SMPS or LDO) may exceed PMIC rated current for some power rails, which is expected. It is also expected that there is no real use case that leads to all loads to have maximum current at the same time.
- Refer to *PM8937 Power Management IC Device Specification* (80-P2564-1) for maximum SMPS and LDO ratings.
- The actual currents from the third party components (eMMC, LCD, camera, and sensors, and so on) may be different from what is shown in the power grid.

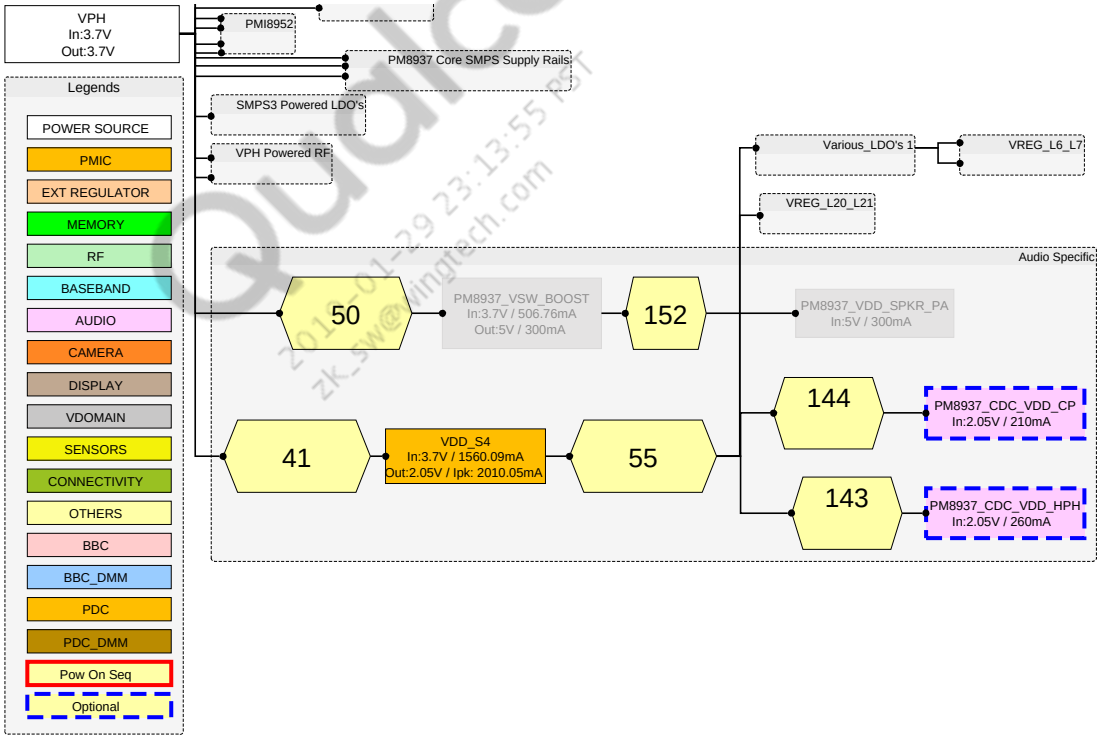


Figure 2-1 MSM digital and audio-specific branches

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

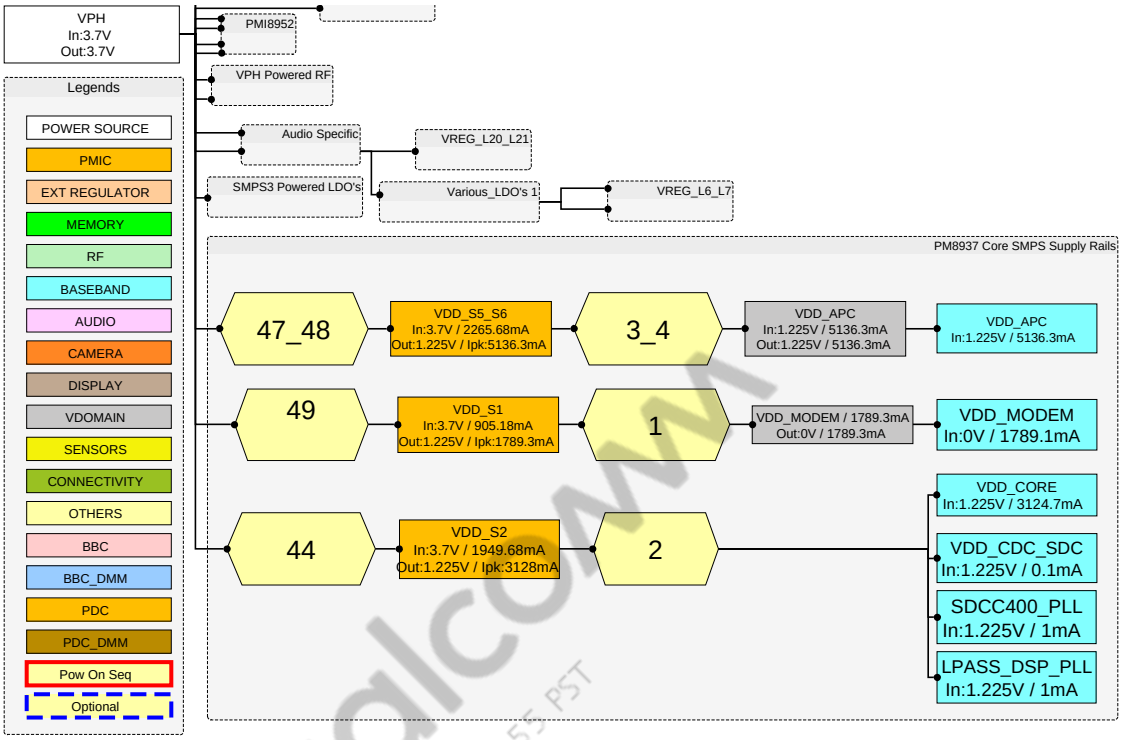


Figure 2-2 MSM digital branches (CX, MPSS, and APSS)

Qualcomm
2019-01-09 23:13:55 PST
zk_sw@wingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

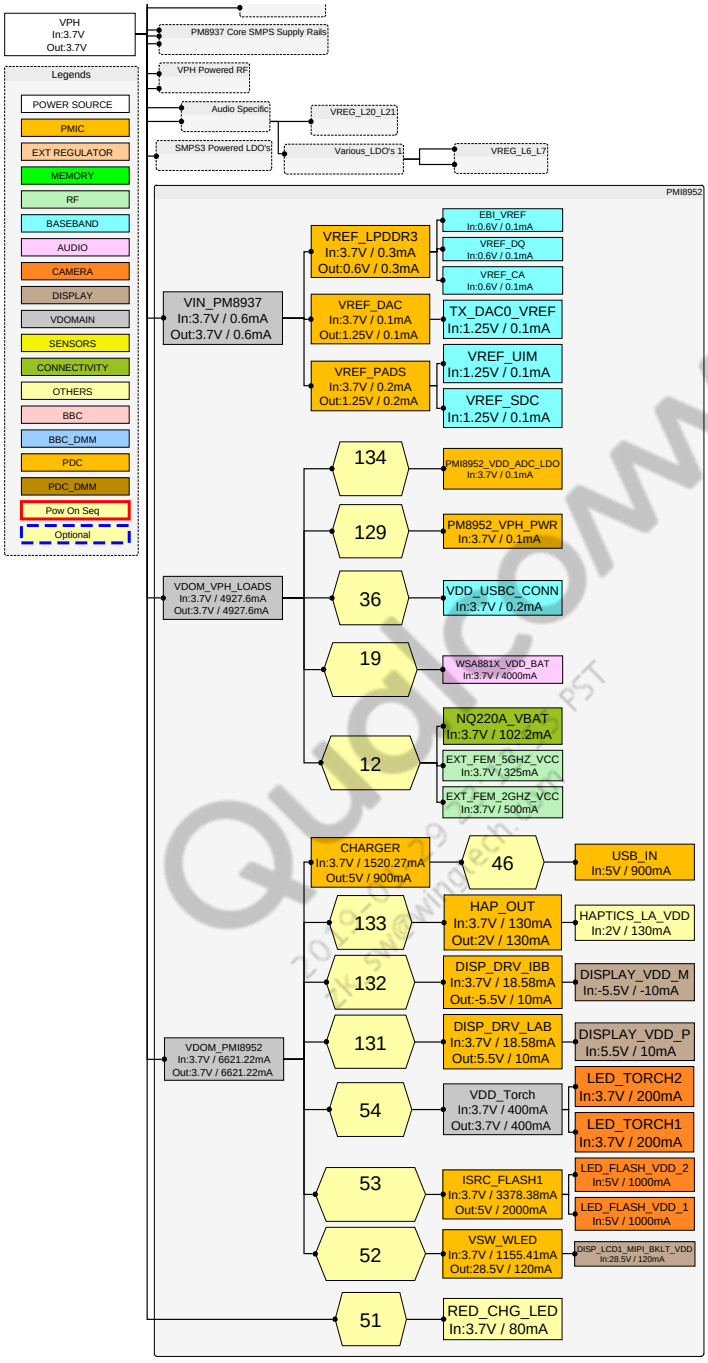


Figure 2-3 MSM digital, PMIC, and external load branches

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

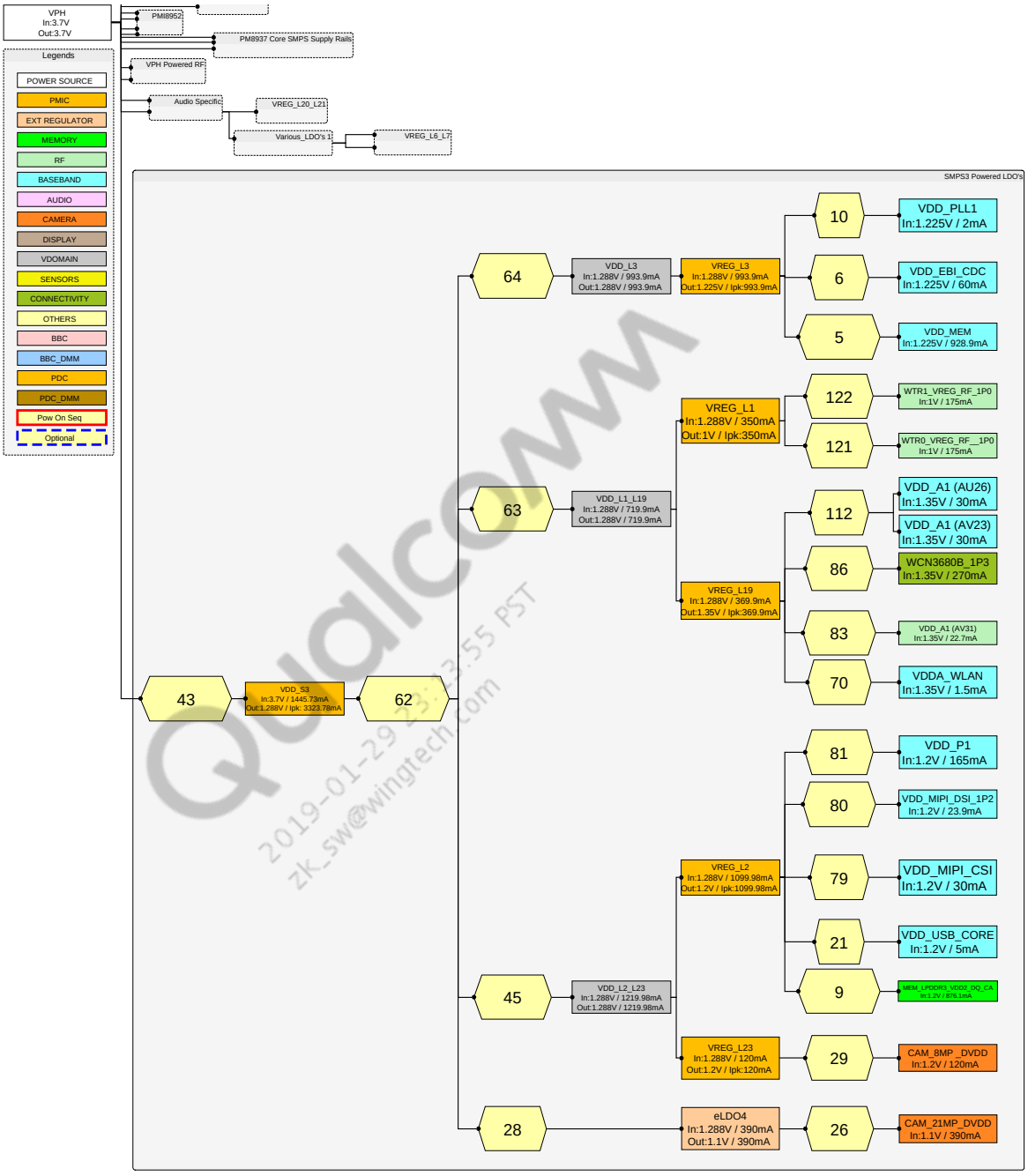


Figure 2-4 MSM digital, memory, WTR, camera, and connectivity branches

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

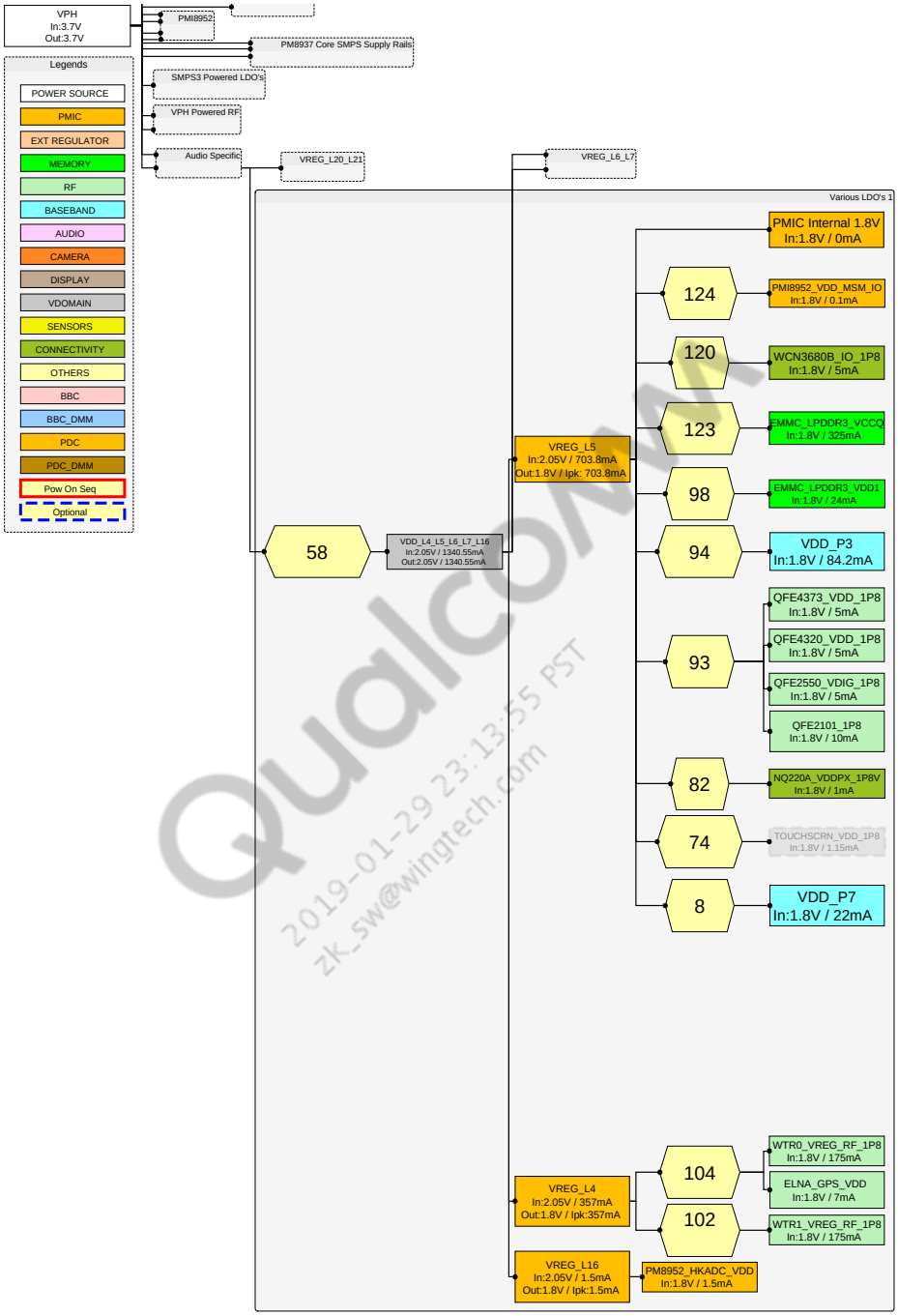


Figure 2-5 MSM digital, codec, memory, WTR, and connectivity branches

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

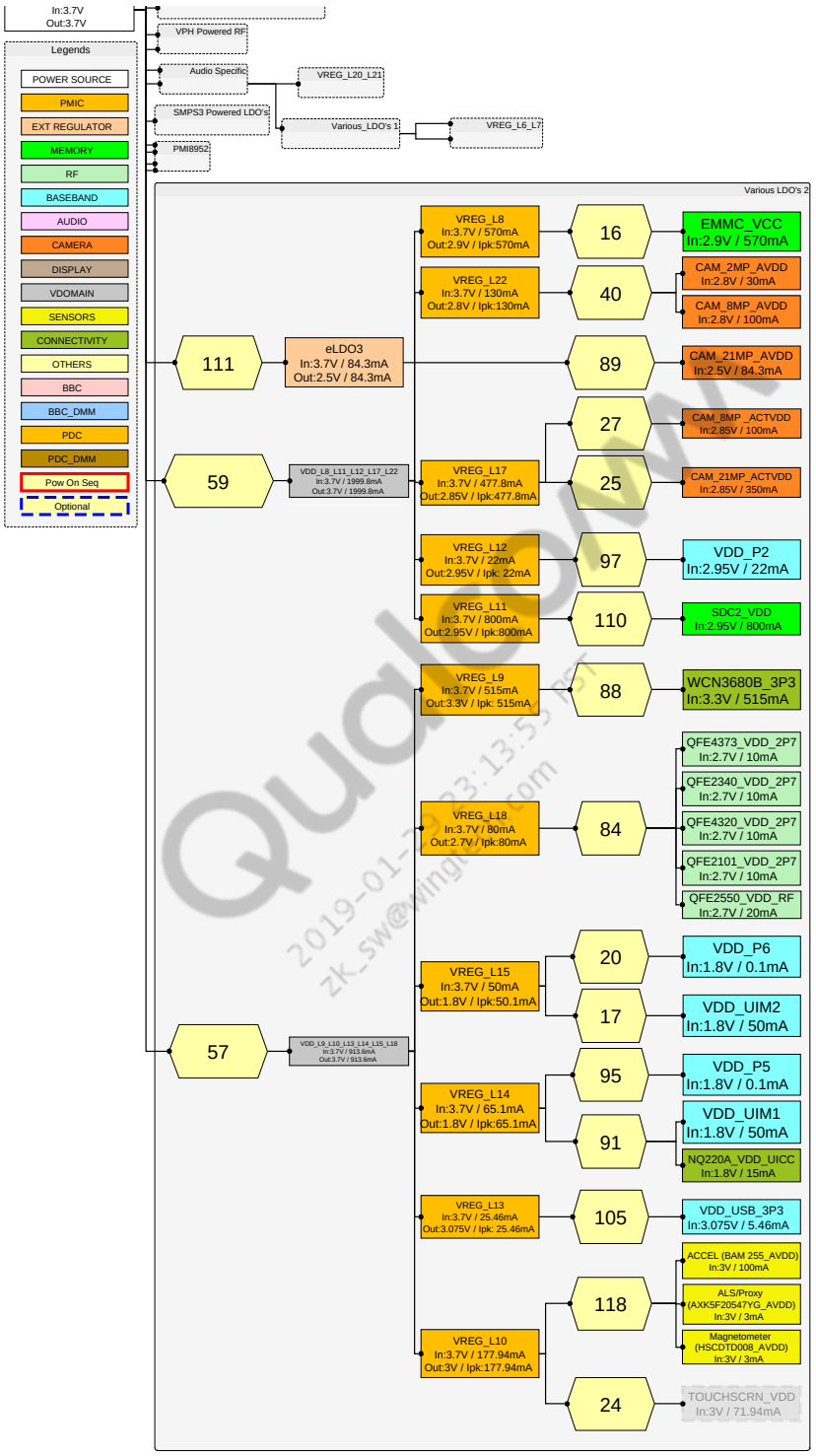


Figure 2-6 MSM digital, memory, UIM, SDCC, QFE, camera, sensor, display and connectivity branches

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

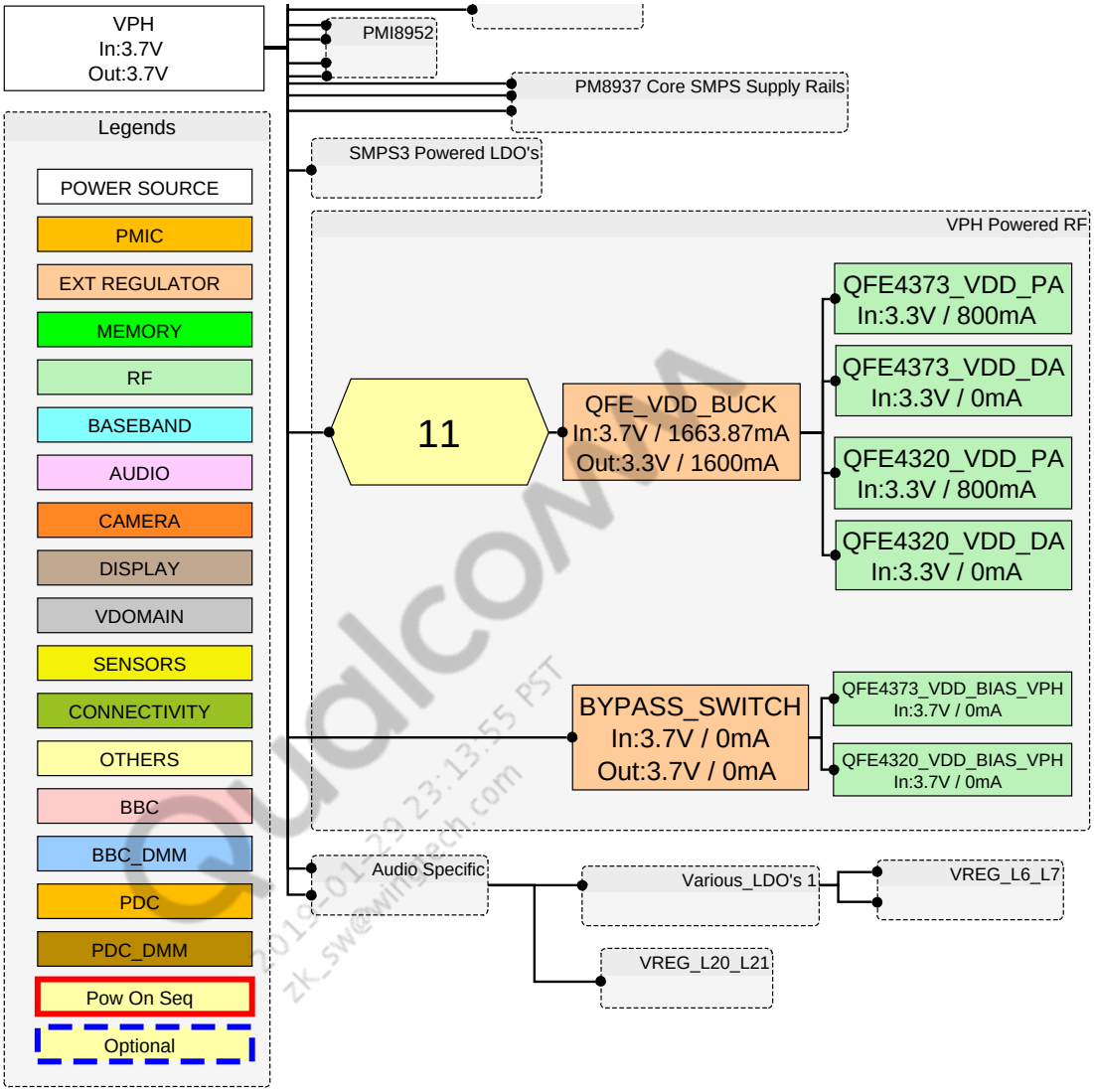


Figure 2-7 RF power branches

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

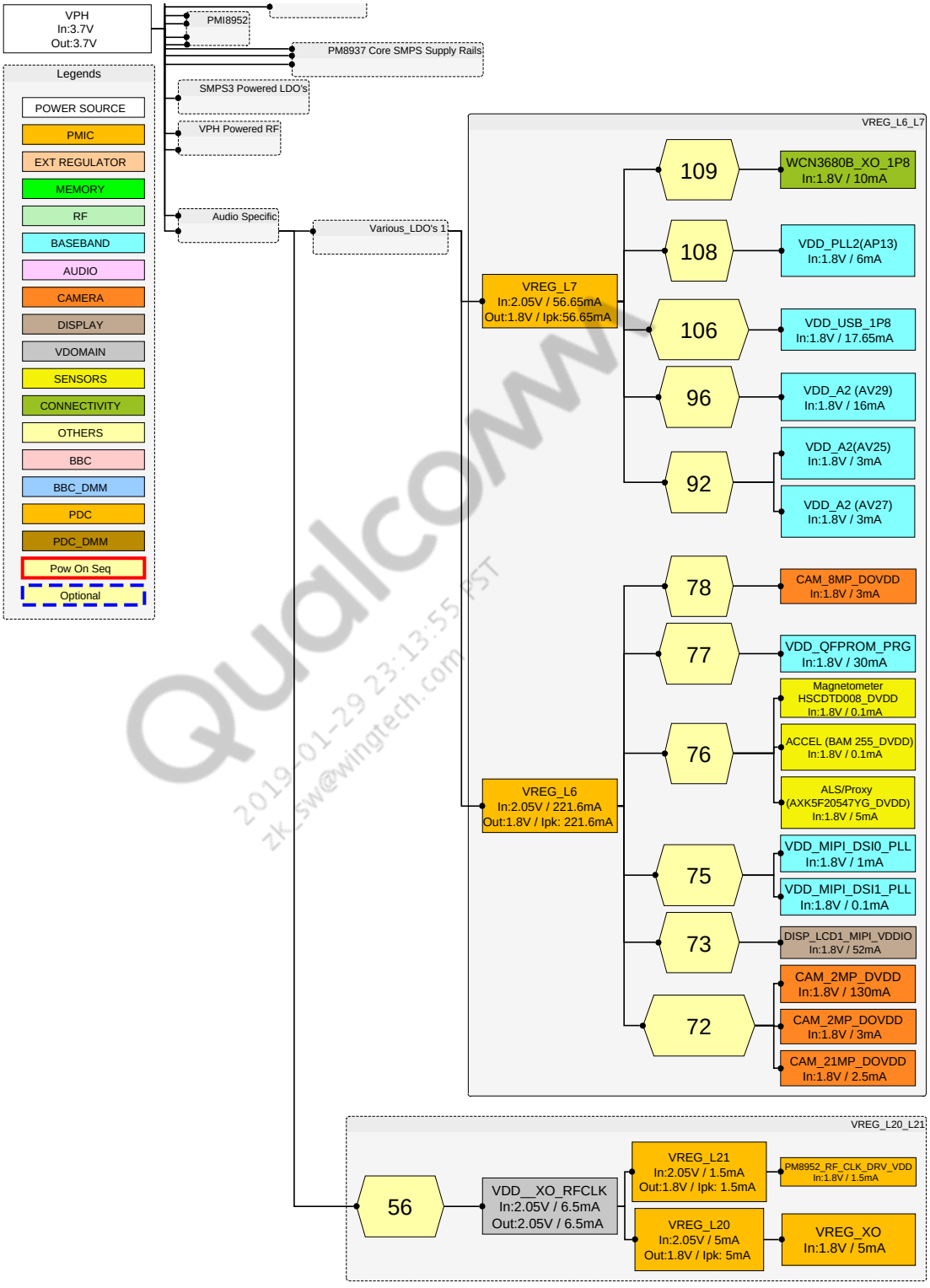


Figure 2-8 MSM digital, PMIC, codec, camera, sensors, and connectivity branches

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

3 Test definition

Table 3-1 lists the definitions of test conditions (air interface configuration, multimedia, display activity, lighting status, and so on) for the current consumption tests.

Table 3-1 Test definitions

Test case	Code	Operating band	Definition
Sleep (Airplane mode, rock bottom)	AIR1	–	Airplane mode selected through UI; if UI support is not present, configure modem in Low Power mode with no wake-ups for paging process; backlight and display off.
WCDMA standby 2.56 sec	WS1	IMT	WCDMA idle, stationary A, Discontinuous receive (DRx) 2.56 sec, RxAGC at phone ~ -50 dBm, duration 64 sec; Sintrasearch (intrafrequency) and Sintersearch (interfrequency) CPICH E_c/I_0 < -10 dB; backlight and display off.
WCDMA talk + 0 dBm, IMT	WT1	IMT	WCDMA AMR voice, muted, empty frames on uplink and downlink, total Tx 0 dBm, RxAGC at phone ~ -50 dBm, IMT, no Receive Diversity (RxD); backlight and display off.
CDMA QPCH standby 5.12 sec	CS2	Cell	CDMA QPCH Standby mode, SCI = 2 (5.12 sec), RxAGC at phone ~ -50 dBm, single sector, no neighbors; cell band; backlight and display off.
EV-DO standby 5.12 sec	DS3	–	EV-DO (5.12 sec) only Standby mode. Rx AGC ~ -50 dBm, single sector, no neighbors. Cell band, duration 64 sec; backlight and display off.
CDMA talk + 0 dBm, cell band	CT1	Cell	CDMA-only mode, muted, empty frames on uplink and downlink, total Tx = 0 dBm, RxAGC at phone ~ -50 dBm, EVRC RC3 full rate, no headset, cell band; backlight and display off.
GSM standby 1.18 sec	GS1	PGSM	GPRS standby, MFRM5 (1.17 sec), RxAGC at phone ~ -50 dBm, PGSM, no neighbor, duration 59 sec; backlight and display off.
GSM talk 5 dBm, no Discontinuous Transmit (DTx), PGSM	GT1	PGSM	GSM full-rate voice, muted, DTx off, empty frames on uplink and downlink, total Tx = 5 dBm, RxAGC at phone ~ -50 dBm, PGSM, 100% voice activity; backlight and display off.
TD-SCDMA standby 1.28 sec	TCS1	Band 34	TD-SCDMA idle, stationary A, DRx 1.28 sec, Rx power level -50 dBm at phone antenna connector, test duration 64 sec. Sintrasearch (intra frequency) and Sintersearch (inter frequency) CPICH E_c/I_o is about -15 dB; backlight and display off.
TD-SCDMA talk 0 dBm, B34	TCT1	Band 34	TD-SCDMA voice, muted, empty frames on uplink and downlink, total Tx 0 dBm, Rx power level -50 dBm at phone antenna connector, IMT (B1); backlight and display off.

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

Test case	Code	Operating band	Definition
VoLTE TDD call (40 ms DRX cycle, +0 dBm, MIMO, B38)	VOLTE5	B38	VoLTE talk 0 dBm 40% voice activity + 40% Listen state + 20% Silent state, 40 ms CDRX, SPS, CMCC configuration, B38 **Test conditions** Embedded LTE AMR-WB full-rate voice, Tx power 0 dBm, LTE TDD 20 MHz bandwidth, UL/DL config 1, SSF 7, 40 ms CDRX, HARQ:4 Dynamic scheduling in UL and DL, 40% voice activity + 40% listen state + 20% silent state, backlight and display off, on-duration of 2 ms, inactivity timer of 2 ms. Average the power over three runs. 1. Run with 0% voice activity (play 100% VA file in the remote device, mute local device) 2. Run with 100% voice activity (mute remote device, play 100% VA file in the local device) 3. Run with 0% activity with both devices (mute remote device as well as local device)
VoLTE FDD call (40 ms DRX cycle, +0 dBm, MIMO, B13)	VOLTE1	B13	VoLTE talk 0 dBm 40% voice activity + 40% Listen state + 20% Silent state, 40 ms CDRX, dynamic scheduling, 10 MHz, timers 2 ms, B13 **Test conditions** Embedded LTE AMR-WB full-rate voice, Tx power 0 dBm, LTE 10 MHz bandwidth, 40 ms CDRX, HARQ:4 Dynamic scheduling in UL and DL, 40% voice activity + 40% Listen state + 20% Silent state, backlight and display off, on-duration 2 ms, inactivity timer 2 ms Average the power over three runs. 1. Run with 0% voice activity (play 100% VA file in the remote device, mute local device) 2. Run with 100% voice activity (mute remote device, play 100% VA file in the local device) 3. Run with 0% activity with both devices (mute remote device as well as local device)
HSDPA downlink 7.2 Mbps + 0 dBm, IMT (RxD/no RxD)	HS22E/ HS21E	IMT	HSDPA embedded, data socket initiated through the UI, downlink 7.2 Mbps, FTP, Tx = +0 dBm, no USB, RxD on/RxD off.
DC HSDPA downlink 42 Mbps + 0 dBm, IMT (no RxD)	HS61E	IMT	HSPA+ Cat 24 data socket initiated through UI, dual carrier (42 Mbps), UDP, 64 QAM, RxD off, IMT band.
TD-SCDMA HSDPA 2.8 Mbps	TDHS1E	B34/39	TD-SCDMA HSDPA at 2.8 Mbps, Tx 0 dBm, without USB, 16 QAM, RxD off, band 34/39; backlight and display off.
LTE standby 2.56 sec	LS1	Band 13	LTE Standby mode, DRx = 2.56 sec, RxAGC at phone ~ -50 dBm, no neighbors, duration 64 sec; backlight and display off.
LTE TDD standby 2.56 sec	LS3	B41	LTE TDD Standby mode, DRx = 2.56 sec, ULDL2, SSF#7, B41, Rx power level -50 dBm at phone antenna connector, measurement duration 64 sec; Sintra = 0 and Snonintra = 0, no neighbor cells, backlight and display off; EPRE = -50 dBm/kHz.

Qualcomm
2019-01-29 23:13:5
zk_sw@wingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

Test case	Code	Operating band	Definition
LTE Cat 3 (68/23 Mbps, + 0 dBm, B13)	LTE1E	Band 13	LTE data Cat 3, 2 x 2 MIMO, RB 50, MCS 28, 64 QAM, CP normal; PCFICH 3sym, DCI 1A, type 0, PHICH 1/6, Tx 0 dBm, downlink spectrum bandwidth 10 MHz; backlight and display off – Embedded.
LTE Cat 4 (150/50 Mbps, 0 dBm, B7)	LTE7E	Band 7	LTE data Cat 4, 2x2 MIMO, RB 100, MCS 28, 64 QAM, CP normal; PCFICH 3sym, DCI 1A, type 0, PHICH 1/6, Tx 0 dBm, downlink spectrum bandwidth 20 MHz; backlight and display off – Embedded.
LTE TDD Cat 3 20 MHz (60/18 Mbps + 0 dBm, B41)	LTE5E	B41	LTE data Cat 3, ULDL1, SSF#7, 2x2 MIMO, RB 100, MCS 23, 64 QAM, B41, CP normal, PCFICH 3sym, DCI 1A, type 0, PHICH 1/6, Tx 0 dBm, DL spectrum Bandwidth 20 MHz; backlight and display off.
LTE CA 10 MHz + 10 MHz	LTE8E	Band 4, 17	LTE carrier aggregation 10 MHz + 10 MHz (100/25 Mbps downlink and uplink respectively, B17 Tx + B4), 0 dBm.
DSDS GSM + GSM – 0.47 sec + 0.47 sec	GGS2	–	GSM Slot1 – MFRM = 4 (0.47 sec), Rx AGC ~-50 dBm; GSM Slot2 – MFRM = 2 [0.47 sec], Rx AGC ~-50 dBm; GSM band = PGSM backlight and display off.
DSDS WCDMA + GSM – 0.64 sec + 0.47 sec	WGS3	–	WCDMA band = IMT (B1); GSM band = PGSM; WCDMA Slot1 – DRx = 0.64 sec, Rx AGC ~-50 dBm, GSM Slot2 – MFRM = 2 (0.47 sec), Rx AGC ~-50 dBm Sintrasearch (intrafrequency) and Sintersearch (interfrequency) CPICH E_c/I_o < -10 dB; backlight and display off.
TD-LTE (1.28 sec) + GSM (0.47 sec) standby	LSGS1	–	LTE TDD Standby mode, DRx = 2.56 sec, ULDL1, SSF#7, B40, Rx power level -50 dBm at phone antenna connector, measurement duration 64 sec, no neighbor cells; backlight and display off + EPRE = -50 dBm/kHz GPRS standby, DRx (0.47 sec), RxAGC at phone ~ -50 dBm, PGSM, no neighbor, duration 64 sec; backlight and display off.
TD-SCDMA (0.64 sec) + GSM (0.47 sec) standby	TCSGS1	–	TD-SCDMA idle, stationary A, DRx 0.64 sec, Rx power level -50 dBm at phone antenna connector, test duration 64 sec. CPICH E_c/I_o is about -15 dB; backlight and display off + EPRE = -50 dBm/kHz + GPRS standby, DRx (0.47 sec), RxAGC at phone ~ -50 dBm, PGSM, no neighbor, duration 64 sec; backlight and display off.
GPS 1 Hz Trk (DPO) with WCDMA standby	GPS2	IMT	GPS standalone 1 Hz tracking (DPO); GPS standalone 1 Hz tracking in strong signal conditions; backlight and display off.
Global Navigation Satellite System (GNSS) 1 Hz Trk high sensitivity with WCDMA standby	GNSS1	IMT	GLONASS standalone 1 Hz tracking high sensitivity; backlight and display off.
MP3 playback 128 kbps TM	AU4A	–	MP3 at 44.1 kHz 128 kbps stereo; refer to *MP3 at 44.1 kHz 128 kbps Stereo Clip for Power Measurements* (MH80-VR010-5).
Listen – 100% silence	AU34A	–	Listen keyword detection using 16 kHz mono signal, 100% silence, user-verification on, single keyword.

Qualcomm 2019-01-29 23:13:57 zk_sw@wingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

Test case	Code	Operating band	Definition
Listen – 100% speech	AU35A	–	Listen keyword detection using 16 kHz mono speech, 100% speech, user-verification on, single keyword.
HEVC 720p decode, 30 fps	QTC100A	–	30 fps at HD 720 H.265 3 Mbps, Headset mode, volume set to 50% (8/15 levels)
Video decode (H.264 720p, 30 fps)	QTC77A	–	30 fps at HD 720p H.264 10 Mbps AAC + 96 kbps 44.1 kHz stereo; refer to *30 fps at HD 720p H.264 10 Mbps AAC+ 96 kbps 44.1 kHz Stereo (Qtc77) Clip for Multimedia Power Measurement* (MH80-VR010-7).
Video decode H.264 30 fps 1080p, 20 Mbps	QTC88A	–	30 fps at HD 1080p 20 Mbps AAC+ 96 kbps 44 kHz stereo; refer to *30 fps at HD 1080p H.264 20 Mbps AAC+ 96 kbps 44 kHz Stereo (Qtc88) Clip for Multimedia Power Measurement* (MH80-VR010-8).
16 MP, 30 fps at HD 1080p 20 Mbps Encode at Fullscreen Resolution, at VSYNC, AAC 96 kbps 48 kHz stereo.	QMC31A-1	–	Test scenario: 1. Place the system in Airplane mode. 2. Use default display brightness. 3. Disable Auto brightness feature, if applicable. 4. Set all camera settings to their defaults. 5. Set FPS to the default value of 30. 6. Set AAC+Audio Encode to 96 kbps, 48 kHz stereo. For more information on this test, refer to *Power Consumption Measurement Procedure for MSM (Android-Based)/MDM Devices* (80-N6837-1). Recommended audio recording chain: HPF→Audio Mic Gain→EANS→IIR→AIG→MBDRC→Volume (COPP→Volume (POPP)).
Graphics (3D UI full-screen resolution 30 fps [PowerLift]) – Comp. bypass	QGC23A	–	EXE, PowerLift 3D OpenGL ES Graphics Benchmark Tool Ver 4.6.01 for Linux Android-enabled devices; refer to *EXE, PowerLift 3D Linux Android Graphics Tool Release 5.2.00* (HK11-NC876-1).
Egypt HD 2.5, C24Z16 Onscreen, at VSYNC, at Full Screen resolution	QGC26A	–	Test Scenario: 1. Place the system in Airplane mode. 2. Set display to ON. 3. Use the Fullscreen mode of the platform, FPS (fullspeed, capped by platform VSYNC). GL Benchmark 2.7 includes a 2.5 Egypt HD test Note: It is expected that every platform yields differing power results. These results are a function of LCD intensity, serial interface, display resolution of the screen and fps. For more information on this test, refer to *Power Consumption Measurement Procedure for MSM (Android-Based)/MDM Devices* (80-N6837-1).
Static image display	LCD04A	–	Static image display, at full-screen resolution, at VSYNC

Qualcomm 2021-01-29 23:13:55 zk_sw@wingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

Test case	Code	Operating band	Definition
Accelerometer 10 Hz background processing	SNS5A	–	Test scenario: 1. Disable screen auto-rotate. 2. Place the system in Airplane mode. 3. Disable GPS. 4. Allow screen timeout when charging. 5. Set the screen timeout to 1 min. 6. Power cycle the DUT. 7. Verify that the screen is off during the test. For more information on this test, refer to *Power Consumption Measurement Procedure for MSM (Android-Based)/MDM Devices* (80-N6837-1).
Accelerometer 15 Hz active processing	SNS4A	–	Airplane mode, display on, 15 Hz run with Qsensor test application.
BT (page scan + sniff) with WCDMA standby	BT2	IMT	BT headset bonded, connected, and UE accepting other BT connection requests; BT sniff cycle 1.28 sec and page scan cycle of 1.28 sec; backlight and display off.
WLAN DTIM1 with WCDMA standby	WLS1	IMT	Test scenario: 1. Turn on Airplane mode. 2. In the configuration file, set listen interval to 100 ms and enable BET. 3. Turn on Wi-Fi and connect to the AP. 4. Turn off the display. For more information on this test, refer to *Power Consumption Measurement Procedure for MSM (Android-Based)/MDM Devices* (80-N6837-1). **Note:** Measurement should be in a shielded environment.
Browser over Wi-Fi	WB1A	Wi-Fi	Loading and rendering of low complexity web page (no JavaScript, no Flash); reload every 40 sec (for video, refer to *EXE, iBench V.4.6.01 for Linux Android-Enabled Devices* (72-N7696-1)).
Video streaming over Wi-Fi	VS6A	Wi-Fi	Video streaming over Wi-Fi (720p 2.3 Mbps)

Note: All test codes ending with A were performed in Airplane mode.

Qualcomm 2019-01-29 23:13:55 zk_sw@wingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

4 Chipset current consumption

4.1 Commercial software release target values – Top-level

Commercial software release target values are predictions of the current consumption for the first commercial-quality software release for an OS. These targets ***will not be updated*** after the commercial software is released.

Commercial software release target values for the operational modes defined in Table 3-1 are listed in Table 4-1 for MSM8937 with PM8937. These values show optimized hardware and software configurations and are normalized to a 3.7 V supply voltage.

The power ranges listed in Table 4-1 are the projected power consumption values for a typical device (~50th percentile) and a device at the 95th percentile of the device distribution. Devices that fall outside this range are to be expected. For maximum power specifications, QTI provides a power limit for the AP Dhrystone power and sleep power of the VDD_CORE and VDD_MEM voltage rails. See *MSM8937 Device Specification (Advance Information)* (80-P2468-1) for details.

NOTE: The 28 nm manufacturing process variation across parts and foundries lead to power distribution. The exact shape and median of this distribution is expected to vary over time with the maturing of the 28 nm process across foundries.

Table 4-1 Top-level current consumption targets for MSM8937 with PM8937

Category	Test case	Code	MSM8937 2×1 GB LPDDR3s 1080p display, Video-mode PM8937 with integrated codec WCN3680B, WTR2965 estimated power range goal (mA)
Modem	Airplane	AIR1	2.0 to 2.5
	WCDMA standby 2.56 sec	WS1	2.3 to 2.9
	WCDMA talk + 0 dBm, IMT	WT1	119 to 137
	CDMA QPCH 5.12 sec	CS2	2.3 to 2.9
	CDMA talk + 0 dBm, cell band	CT1	111 to 127
	GSM standby 1.18 sec	GS1	2.6 to 3.2
	GSM talk + 5 dBm, no DTx, PGSM	GT1	85 to 97
	TD-SCDMA standby 1.28 sec	TCS1	2.5 to 3.2
	TD-SCDMA talk + 0 dBm	TCT1	74 to 85
	EV-DO standby 5.12 sec	DS3	2.4 to 3.0

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

Category	Test case	Code	MSM8937 2×1 GB LPDDR3s 1080p display, Video-mode PM8937 with integrated codec WCN3680B, WTR2965 estimated power range goal (mA)
	FDD VoLTE Call (40 ms DRX cycle, +0 dBm, MIMO, B13)	VoLTE1	103 to 118
	TDD VoLTE Call (40 ms DRX cycle, +0 dBm, MIMO, B38)	VoLTE6	120 to 138
	HSDPA downlink 7.2 Mbps + 0 dBm, IMT (RxD)	HS22E	165 to 190
	DC HSDPA downlink 42 Mbps + 0 dBm, IMT (no RxD)	HS61E	163 to 187
	EVDO DL 3.1 Mbps +0 dBm, CEL	DD1E	136 to 157
	TD-SCDMA HSDPA 2.8 Mbps (RxD OFF)	TDHS1E	110 to 127
	FDD LTE standby 2.56 sec	LS1	2.4 to 3.1
	TDD LTE standby 2.56 sec	LS3	2.5 to 3.1
	FDD LTE Cat 3, 10 MHz (68/23 Mbps, 0 dBm, B13)	LTE1E	260 to 299
	FDD LTE Cat 4, 20 MHz (150/50 Mbps, 0 dBm, B7)	LTE7E	365 to 419
	FDD-LTE Cat 3 2xCA 10 + 10 (100/25 Mbps, 0 dBm, B4+B17, Tx B17)	LTE8E	405 to 466
	LTE TDD Cat 3 20 MHz (60/18 Mbps + 0 dBm, B41)	LTE5E	240 to 275
	FDD LTE CDRx standby 320 sec	CDRxS1	15.4 to 19
	TDD LTE CDRx standby 320 sec	CDRxS4	18.7 to 23
	DSDS TDLTE + GSM – 1.28 sec + 0.47 sec	LSGS1	5.0 to 6.3
	DSDS TD-SCDMA + GSM – 0.64 sec + 0.47 sec	TCSGS1	4.8 to 6.0
	DSDS GSM + GSM – 0.47 sec + 0.47 sec	GGS2	5.2 to 6.5
	DSDS WCDMA + GSM – 0.64 sec + 0.47 sec	WGS3	5.1 to 6.4
GPS	GPS 1 Hz Trk (dynamic power optimization)	GPS2	12 to 14
	GNSS 1 Hz Trk	GNSS1	48 to 55
Multimedia	MP3 playback 128 Kbps Tunnel mode	AU4A	23 to 29
	Listen (SVA), 100% silence	AU34A	13 to 17
	Listen (SVA), 100% speech	AU35A	15 to 19
	H.264 720p decode, 30 fps	QTC77A	108 to 124
	H.264 1080p decode, 30 fps	QTC88A	129 to 148
	H.264 1080p, 20 Mbps, encode AAC+ 128 kbps (45c), (16 MP sensor, 16:9), 30 fps	QMC31A-1	406 to 467
	3D UI 30 fps (graphic, power lift)	QGC23A	138 to 159
	Egypt HD,30 fps	QGC26A	400 to 460

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

Category	Test case	Code	MSM8937 2×1 GB LPDDR3s 1080p display, Video-mode PM8937 with integrated codec WCN3680B, WTR2965 estimated power range goal (mA)
	Static image	LCD04A	48 to 56
	Browser over Wi-Fi	WB1A	75 to 86
	Video streaming 720p over Wi-Fi	VS6A	151 to 174
Sensor	Background 20 Hz buffering of accelerometer data with 1 Hz ADSP wakeup	SNS6A	2.26 to 2.8
	Accel active use case at 15 Hz	SNS4A	55 to 63

Table 4-2 Top-level current consumption targets for MSM8937 with PM8937 (Command mode panel)

Category	Test case	Code	MSM8937 2×1 GB LPDDR3s 1080p display, command-mode PM8937 with integrated codec WCN3680B, WTR2965 estimated power range goal (mA)
Multimedia	H.264 720p decode, 30 fps	QTC77AC	103 to 119
	H.264 1080p decode, 30 fps	QTC88AC	127 to 146
	3D UI 30 fps (graphic, power lift)	QGC23AC	133 to 153
	Static image (48 fps)	LCD04AC	6 to 7

Qualcomm 2019-01-29 13:13:55 PST

NOTE: Memory configurations 2×1 GB LPDDR3 will be used in internal platform for breakdown measurements.

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

NOTE: The above power dashboard numbers are estimated power range goals and do not include contribution from the peripheral components like LCM, camera sensors, and so on.

4.2 Battery size for MSM8937-based designs

The MSM™ platform current consumption estimates and OEM product-specific requirements or carrier requirements (for example, Days of Use (DoU)) play a crucial role in determining the appropriate battery size for the product.

The power data comparison provides the estimated current consumption for MSM8937 platform, based on the projected power distribution across 50 to 95% of the device population.

NOTE: OEMs are expected to select an appropriate battery size to meet their product requirements and specifications.

4.3 Measured values – Top-level

Power dashboard measured values will be published in the release notes. This document will not be updated with the battery data. The release notes DCN will be updated in a future revisions of this document.

4.4 Breakdown measurements (per regulator values)

This section lists breakdown data for the modem and Multimedia use cases based on the CS release.

Table 4-3 Rock bottom sleep with SIM (AIR1)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	-0.05 mA
2	S2_Output(CX)	0.51 V	1.77 mA
3	S5_6_Output(APPS)	0.00 V	-0.06 mA
4		0.00 V	0.06 mA
62	S3_Output(VPM_S3_1P288)	1.28 V	1.26 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.00 mA
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA
9	L2_LPDDR(SMPS3A)	1.20 V	0.85 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.05 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.02 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.09 mA
81	L2_PX1(SMPS3A)	1.20 V	0.00 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	0.60 V	0.45 mA
6	L3_CDC_EBI0(SMPS3A)	0.60 V	0.03 mA
10	L3_PLL(SMPS3A)	0.60 V	0.00 mA
28	V_S3_ELDO4(SMPS3A)	1.28 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	-0.05 mA
55	S4_Output(VPM_S4_2P05)	1.91 V	1.25 mA
102	L4_WTR1(SMPS4A)	0.33 V	0.00 mA
104	L4_WTR0(SMPS4A)	0.33 V	0.01 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA
94	L5_PX3(SMPS4A)	1.80 V	0.37 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	0.69 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.06 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.00 mA
72	L6_CAM0_D_DO(SMPS4A)	1.77 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	1.77 V	0.00 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.03 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	1.77 V	0.00 mA
76	L6_SENSOR(SMPS4A)	1.77 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	1.77 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	1.77 V	0.00 mA
92	L7_HBBRX(SMPS4A)	0.64 V	0.00 mA
96	L7_TXDAC(SMPS4A)	0.64 V	0.00 mA
106	USB_VDDA(SMPS4A)	0.64 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	0.64 V	0.00 mA
109	L7_WCN_XO_1P8(SMPS4A)	0.64 V	0.00 mA
100	V_S4_ELDO6	1.91 V	0.00 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	1.91 V	0.00 mA
144	CDC_VDD_CP	1.91 V	0.00 mA
105	L13_USB_VDDA	0.00 V	0.00 mA
118	L10_SENSOR	2.85 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	0.03 mA
84	L18_QFE_RF(RF 360)	0.00 V	0.00 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.04 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
95	L14_PX5_DUAL	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.10 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.70 V	0.01 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.70 V	0.00 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.70 V	0.04 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.70 V	0.00 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.70 V	0.03 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.70 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.70 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.70 V	0.00 mA
53	VIN_FLASH(VDOM_PMi8937)	3.60 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.70 V	0.02 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.70 V	0.00 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.70 V	0.00 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.70 V	0.01 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.70 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.70 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.70 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.70 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.70 V	0.03 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.70 V	0.01 mA
50	VPH_SPKR	3.70 V	0.00 mA
0	BATTERY (Measured)	3.70 V	2.10 mA

QUALCOMM Confidential and Proprietary

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

Table 4-4 WCDMA standby 2.56 sec (WS1)

RCM channel	Regulator	WCDMA sleep		WCDMA awake	
		Voltage (V)	Current I(mA)	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	0.00 mA	0.59 V	39.75 mA
2	S2_Output(CX)	0.51 V	1.99 mA	0.88 V	57.65 mA
3	S5_6_Output(APPS)	0.00 V	0.00 mA	0.00 V	-0.06 mA
4		0.00 V	0.10 mA	0.00 V	0.07 mA
62	S3_Output(VPM_S3_1P288)	1.28 V	1.42 mA	1.29 V	47.76 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA	0.69 V	3.56 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA	0.69 V	-0.12 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA	0.89 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA	0.88 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA	0.88 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.00 mA	0.88 V	0.89 mA
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA	0.88 V	0.64 mA
9	L2_LPDDR(SMPS3A)	1.20 V	0.89 mA	1.20 V	13.91 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.04 mA	1.20 V	0.07 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.03 mA	1.20 V	0.03 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.09 mA	1.20 V	0.04 mA
81	L2_PX1(SMPS3A)	1.20 V	0.00 mA	1.20 V	6.99 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	0.60 V	0.53 mA	1.00 V	5.50 mA
6	L3_CDC_EBI0(SMPS3A)	0.60 V	0.04 mA	1.00 V	2.35 mA
10	L3_PLL(SMPS3A)	0.60 V	0.00 mA	1.00 V	0.06 mA
28	V_S3_ELDO4(SMPS3A)	1.28 V	0.00 mA	1.29 V	0.12 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	0.00 mA	0.00 V	-0.07 mA
55	S4_Output(VPM_S4_2P05)	1.91 V	1.49 mA	2.05 V	14.62 mA
102	L4_WTR1(SMPS4A)	0.47 V	0.00 mA	1.42 V	2.51 mA
104	L4_WTR0(SMPS4A)	0.47 V	0.00 mA	1.42 V	0.13 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA	1.80 V	0.13 mA
94	L5_PX3(SMPS4A)	1.80 V	0.39 mA	1.80 V	1.77 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	0.69 mA	1.80 V	1.90 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.05 mA	1.80 V	-0.14 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.00 mA	1.80 V	0.25 mA
72	L6_CAM0_D_DO(SMPS4A)	0.02 V	0.00 mA	0.02 V	0.02 mA
73	L6_LCD_IO(SMPS4A)	0.02 V	0.00 mA	0.02 V	0.00 mA

Qualcomm 2019-01-29 23:13:55 PST zk_sw@wingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	WCDMA sleep		WCDMA awake	
		Voltage (V)	Current I(mA)	Voltage (V)	Current I (mA)
74	L5_TS_IO(SMPS4A)	1.80 V	0.04 mA	1.80 V	0.07 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	0.02 V	0.00 mA	0.02 V	0.00 mA
76	L6_SENSOR(SMPS4A)	0.02 V	0.00 mA	0.02 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	0.02 V	0.00 mA	0.02 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	0.02 V	0.00 mA	0.02 V	0.00 mA
92	L7_HBBRX(SMPS4A)	0.95 V	0.00 mA	1.78 V	0.13 mA
96	L7_TXDAC(SMPS4A)	0.95 V	0.00 mA	1.78 V	0.06 mA
106	USB_VDDA(SMPS4A)	0.95 V	0.00 mA	1.78 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	0.95 V	0.00 mA	1.78 V	1.01 mA
109	L7_WCN_XO_1P8(SMPS4A)	0.95 V	0.00 mA	1.78 V	0.00 mA
100	V_S4_ELDO6	1.91 V	0.00 mA	2.05 V	-0.12 mA
35	ELDO6_BC	0.00 V	0.00 mA	0.00 V	-0.07 mA
143	CDC_VDD_PA	1.91 V	0.00 mA	2.05 V	0.02 mA
144	CDC_VDD_CP	1.91 V	0.00 mA	2.05 V	-0.20 mA
105	L13_USB_VDDA	0.00 V	0.00 mA	0.00 V	0.00 mA
118	L10_SENSOR	2.85 V	0.00 mA	2.85 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	0.03 mA	2.85 V	0.03 mA
84	L18_QFE_RF(RF 360)	0.02 V	0.00 mA	1.96 V	1.47 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.04 mA	1.80 V	0.04 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.12 V	0.01 mA	0.11 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA	0.00 V	-0.05 mA
110	L11_SDC2(MEM-SD)	0.00 V	-0.05 mA	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA	0.00 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA	0.00 V	0.01 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.70 V	0.03 mA	3.70 V	0.00 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.70 V	0.02 mA	3.70 V	0.22 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.70 V	0.07 mA	3.70 V	0.00 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.70 V	0.01 mA	3.70 V	0.00 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.70 V	0.12 mA	3.70 V	0.00 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.70 V	0.04 mA	3.70 V	0.06 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.70 V	0.00 mA	3.70 V	0.00 mA

Qualcomm 2019-01-29 23:13:55 PST zk_swewingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	WCDMA sleep		WCDMA awake	
		Voltage (V)	Current I(mA)	Voltage (V)	Current I (mA)
52	VPH_PWR_WLED(VDOM_PMi8937)	3.70 V	0.01 mA	3.70 V	0.54 mA
53	VIN_FLASH(VDOM_PMi8937)	3.60 V	0.00 mA	3.59 V	0.16 mA
54	VIN_TORCH(VDOM_PMi8937)	3.70 V	0.04 mA	3.70 V	0.00 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.70 V	0.01 mA	3.70 V	0.08 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.70 V	0.00 mA	3.70 V	0.12 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.70 V	0.01 mA	3.70 V	0.40 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA	0.11 V	0.00 mA
51	VPH_CHG_LED	3.70 V	0.00 mA	3.70 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.70 V	0.00 mA	3.70 V	0.01 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.70 V	0.01 mA	3.70 V	0.00 mA
111	VPH_PWR_ELDO3(VPH)	3.70 V	0.00 mA	3.70 V	0.02 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.70 V	0.03 mA	3.70 V	0.55 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.00 mA	3.70 V	0.01 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.70 V	0.03 mA	3.70 V	0.05 mA
50	VPH_SPKR	3.70 V	0.01 mA	3.70 V	0.14 mA
0	BATTERY (Measured)	3.70 V	2.13 mA	3.70 V	48.34 mA

Table 4-5 TD-SCDMA standby 1.28 sec (TCS1)

RCM channel	Regulator	TD-SCDMA sleep		TD-SCDMA awake	
		Voltage (V)	Current I (mA)	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	0.00 mA	0.49 V	13.92 mA
2	S2_Output(CX)	0.51 V	1.48 mA	0.84 V	7.35 mA
3	S5_6_Output(APPS)	0.00 V	0.00 mA	0.00 V	0.31 mA
4		0.00 V	0.07 mA	0.00 V	0.33 mA
62	S3_Output(VPM_S3_1P288)	1.28 V	1.69 mA	1.29 V	18.68 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA	0.56 V	1.66 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA	0.56 V	-0.07 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA	0.77 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA	0.76 V	0.03 mA
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA	0.76 V	0.03 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.00 mA	0.76 V	8.35 mA
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA	0.76 V	0.56 mA
9	L2_LPDDR(SMPS3A)	1.20 V	0.88 mA	1.20 V	12.80 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.04 mA	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.02 mA	1.20 V	0.02 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.09 mA	1.20 V	0.04 mA
81	L2_PX1(SMPS3A)	1.20 V	0.00 mA	1.20 V	5.13 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	TD-SCDMA sleep		TD-SCDMA awake	
		Voltage (V)	Current I (mA)	Voltage (V)	Current I (mA)
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	0.60 V	0.44 mA	0.96 V	4.36 mA
6	L3_CDC_EBI0(SMPS3A)	0.60 V	0.04 mA	0.96 V	2.06 mA
10	L3_PLL(SMPS3A)	0.60 V	0.00 mA	0.96 V	0.03 mA
28	V_S3_ELDO4(SMPS3A)	1.28 V	0.00 mA	1.29 V	-0.07 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	-0.05 mA	0.00 V	0.04 mA
55	S4_Output(VPM_S4_2P05)	1.91 V	1.54 mA	2.03 V	7.79 mA
102	L4_WTR1(SMPS4A)	0.60 V	0.00 mA	1.37 V	1.28 mA
104	L4_WTR0(SMPS4A)	0.60 V	0.01 mA	1.37 V	0.05 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA	1.80 V	0.01 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA	1.80 V	0.06 mA
94	L5_PX3(SMPS4A)	1.80 V	0.37 mA	1.80 V	1.55 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	0.68 mA	1.80 V	1.62 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.05 mA	1.80 V	0.13 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.00 mA	1.80 V	0.21 mA
72	L6_CAM0_D_DO(SMPS4A)	1.77 V	0.00 mA	1.73 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	1.77 V	0.00 mA	1.73 V	0.00 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.03 mA	1.80 V	0.03 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	1.77 V	0.00 mA	1.73 V	0.00 mA
76	L6_SENSOR(SMPS4A)	1.77 V	0.00 mA	1.73 V	0.02 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	1.77 V	0.00 mA	1.73 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	1.77 V	0.00 mA	1.73 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.16 V	0.00 mA	1.69 V	0.12 mA
96	L7_TXDAC(SMPS4A)	1.16 V	0.00 mA	1.69 V	0.05 mA
106	USB_VDDA(SMPS4A)	1.16 V	0.00 mA	1.69 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.16 V	0.00 mA	1.68 V	0.85 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.16 V	0.00 mA	1.69 V	0.00 mA
100	V_S4_ELDO6	1.91 V	0.00 mA	2.03 V	-0.05 mA
35	ELDO6_BC	0.00 V	0.00 mA	0.00 V	0.00 mA
143	CDC_VDD_PA	1.91 V	0.00 mA	2.03 V	-0.05 mA
144	CDC_VDD_CP	1.91 V	0.00 mA	2.03 V	-0.16 mA
105	L13_USB_VDDA	0.00 V	0.00 mA	0.00 V	0.00 mA
118	L10_SENSOR	2.85 V	0.00 mA	2.85 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	0.03 mA	2.85 V	0.03 mA
84	L18_QFE_RF(RF 360)	0.04 V	0.00 mA	1.72 V	0.74 mA

Qualcomm 2019-01-29 23:13:55 PST zk_swe@wingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	TD-SCDMA sleep		TD-SCDMA awake	
		Voltage (V)	Current I (mA)	Voltage (V)	Current I (mA)
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.04 mA	1.80 V	0.04 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.12 V	0.00 mA	0.12 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA	0.00 V	-0.05 mA
97	L12_PX2	0.00 V	0.00 mA	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA	0.00 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA	0.00 V	0.00 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.70 V	0.02 mA	3.70 V	0.21 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.70 V	0.02 mA	3.70 V	0.37 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.70 V	0.04 mA	3.70 V	0.00 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.70 V	0.00 mA	3.70 V	0.00 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.70 V	0.06 mA	3.70 V	0.38 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.70 V	0.04 mA	3.70 V	0.01 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.70 V	0.00 mA	3.70 V	0.01 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.70 V	0.03 mA	3.70 V	0.85 mA
53	VIN_FLASH(VDOM_PMi8937)	3.58 V	0.00 mA	3.56 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.70 V	0.02 mA	3.70 V	0.00 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.70 V	0.00 mA	3.70 V	0.00 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.70 V	0.00 mA	3.70 V	0.03 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.70 V	0.00 mA	3.70 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA	0.10 V	0.16 mA
51	VPH_CHG_LED	3.70 V	0.00 mA	3.70 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.70 V	0.00 mA	3.70 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.70 V	0.02 mA	3.70 V	0.09 mA
111	VPH_PWR_ELDO3(VPH)	3.70 V	0.01 mA	3.70 V	0.10 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.70 V	0.03 mA	3.70 V	0.46 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.00 mA	3.70 V	0.02 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.70 V	0.03 mA	3.70 V	0.08 mA
50	VPH_SPKR	3.70 V	0.00 mA	3.70 V	0.09 mA
0	BATTERY (Measured)	3.70 V	2.15 mA	3.70 V	35.09 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

Table 4-6 LTE standby 2.56 sec (LS3)

RCM channel	Regulator	LTE sleep		LTE awake	
		Voltage (V)	Current I (mA)	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	0.00 mA	0.71 V	37.49 mA
2	S2_Output(CX)	0.51 V	1.81 mA	0.89 V	49.26 mA
3	S5_6_Output(APPS)	0.00 V	0.00 mA	0.00 V	0.00 mA
4		0.00 V	0.16 mA	0.00 V	0.52 mA
62	S3_Output(VPM_S3_1P288)	1.28 V	1.24 mA	1.29 V	43.57 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA	0.72 V	9.76 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA	0.72 V	-0.10 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA	0.94 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA	0.93 V	0.03 mA
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA	0.93 V	0.03 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.00 mA	0.93 V	9.00 mA
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA	0.93 V	3.49 mA
9	L2_LPDDR(SMPS3A)	1.20 V	0.89 mA	1.20 V	14.27 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.04 mA	1.20 V	0.05 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.02 mA	1.20 V	0.03 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.09 mA	1.20 V	0.03 mA
81	L2_PX1(SMPS3A)	1.20 V	0.00 mA	1.20 V	6.38 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	0.60 V	0.58 mA	1.09 V	9.16 mA
6	L3_CDC_EBI0(SMPS3A)	0.60 V	0.04 mA	1.09 V	2.55 mA
10	L3_PLL(SMPS3A)	0.60 V	0.00 mA	1.09 V	0.03 mA
28	V_S3_ELDO4(SMPS3A)	1.28 V	0.00 mA	1.29 V	0.27 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	0.00 mA	0.00 V	0.05 mA
55	S4_Output(VPM_S4_2P05)	1.91 V	1.50 mA	2.05 V	11.08 mA
102	L4_WTR1(SMPS4A)	0.47 V	0.00 mA	1.50 V	4.32 mA
104	L4_WTR0(SMPS4A)	0.47 V	0.01 mA	1.50 V	0.01 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.08 mA	1.80 V	0.18 mA
94	L5_PX3(SMPS4A)	1.80 V	0.39 mA	1.80 V	1.71 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	0.69 mA	1.80 V	2.08 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.06 mA	1.80 V	0.03 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.00 mA	1.80 V	0.24 mA
72	L6_CAM0_D_DO(SMPS4A)	0.02 V	0.00 mA	0.02 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	0.02 V	0.00 mA	0.02 V	0.00 mA

Qualcomm 2019-01-29 23:13:55 PST zk_sw@wingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	LTE sleep		LTE awake	
		Voltage (V)	Current I (mA)	Voltage (V)	Current I (mA)
74	L5_TS_IO(SMPS4A)	1.80 V	0.04 mA	1.80 V	0.05 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	0.02 V	0.00 mA	0.02 V	0.00 mA
76	L6_SENSOR(SMPS4A)	0.02 V	0.00 mA	0.02 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	0.02 V	0.00 mA	0.02 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	0.02 V	0.00 mA	0.02 V	0.00 mA
92	L7_HBBRX(SMPS4A)	0.95 V	0.00 mA	1.78 V	0.54 mA
96	L7_TXDAC(SMPS4A)	0.95 V	0.00 mA	1.79 V	0.13 mA
106	USB_VDDA(SMPS4A)	0.95 V	0.00 mA	1.79 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	0.95 V	0.00 mA	1.78 V	1.08 mA
109	L7_WCN_XO_1P8(SMPS4A)	0.95 V	0.00 mA	1.79 V	0.00 mA
100	V_S4_ELDO6	1.91 V	0.01 mA	2.05 V	0.03 mA
35	ELDO6_BC	0.00 V	0.00 mA	0.00 V	0.00 mA
143	CDC_VDD_PA	1.91 V	0.00 mA	2.05 V	0.06 mA
144	CDC_VDD_CP	1.91 V	0.00 mA	2.05 V	0.47 mA
105	L13_USB_VDDA	0.00 V	0.00 mA	0.00 V	0.00 mA
118	L10_SENSOR	2.85 V	0.00 mA	2.85 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	0.03 mA	2.85 V	0.03 mA
84	L18_QFE_RF(RF 360)	0.02 V	0.00 mA	2.07 V	1.06 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.04 mA	1.80 V	0.04 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.12 V	0.00 mA	0.12 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA	0.00 V	-0.06 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA	0.00 V	-0.08 mA
97	L12_PX2	0.00 V	0.00 mA	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA	0.00 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA	0.00 V	0.01 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA	0.00 V	0.02 mA
11	VPH_PWR_RF2(PA)	3.70 V	0.04 mA	3.70 V	0.00 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.70 V	0.04 mA	3.70 V	0.00 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.70 V	0.04 mA	3.70 V	0.00 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.70 V	0.02 mA	3.70 V	0.09 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.70 V	0.12 mA	3.70 V	0.38 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.70 V	0.04 mA	3.70 V	0.03 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.70 V	0.00 mA	3.70 V	0.03 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.70 V	0.00 mA	3.70 V	0.00 mA

Qualcomm 2018-01-29 23:12:55 PST zk_swewingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	LTE sleep		LTE awake	
		Voltage (V)	Current I (mA)	Voltage (V)	Current I (mA)
53	VIN_FLASH(VDOM_PMi8937)	3.59 V	0.00 mA	3.58 V	0.04 mA
54	VIN_TORCH(VDOM_PMi8937)	3.70 V	0.01 mA	3.70 V	0.00 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.70 V	0.00 mA	3.70 V	0.02 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.70 V	0.00 mA	3.70 V	0.00 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.70 V	0.00 mA	3.70 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA	0.10 V	0.00 mA
51	VPH_CHG_LED	3.70 V	0.00 mA	3.70 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.70 V	0.00 mA	3.70 V	0.04 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.70 V	0.01 mA	3.70 V	0.00 mA
111	VPH_PWR_ELDO3(VPH)	3.70 V	0.00 mA	3.70 V	0.00 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.70 V	0.03 mA	3.70 V	0.58 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.00 mA	3.70 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.70 V	0.03 mA	3.70 V	0.09 mA
50	VPH_SPKR	3.70 V	0.00 mA	3.70 V	0.00 mA
0	BATTERY (Measured)	3.70 V	2.18 mA	3.70 V	59.86 mA

Qualcomm 2019-01-16 23:12:55 PST zk_sw@wingtech.com

Table 4-7 GSM standby 1.18 sec (GS1)

RCM channel	Regulator	GSM sleep		GSM awake	
		Voltage (V)	Current I(mA)	Voltage (V)	Current I(mA)
1	S1_Output(MSS)	0.00 V	0.01 mA	0.61 V	2.83 mA
2	S2_Output(CX)	0.51 V	1.81 mA	0.87 V	39.62 mA
3	S5_6_Output(APPS)	0.00 V	0.00 mA	0.00 V	-0.20 mA
4		0.00 V	0.17 mA	0.00 V	0.21 mA
62	S3_Output(VPM_S3_1P288)	1.28 V	1.35 mA	1.29 V	20.20 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA	0.68 V	0.85 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA	0.68 V	-0.10 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA	0.89 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA	0.89 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA	0.89 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.00 mA	0.89 V	0.93 mA
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA	0.89 V	0.12 mA
9	L2_LPDDR(SMPS3A)	1.20 V	0.90 mA	1.20 V	7.87 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.04 mA	1.20 V	0.07 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.02 mA	1.20 V	0.03 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.09 mA	1.20 V	0.03 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	GSM sleep		GSM awake	
		Voltage (V)	Current I(mA)	Voltage (V)	Current I(mA)
81	L2_PX1(SMPS3A)	1.20 V	0.00 mA	1.20 V	4.03 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA	0.00 V	0.01 mA
5	L3_MX(SMPS3A)	0.60 V	0.55 mA	0.98 V	3.81 mA
6	L3_CDC_EBI0(SMPS3A)	0.60 V	0.04 mA	0.98 V	1.44 mA
10	L3_PLL(SMPS3A)	0.60 V	0.00 mA	0.98 V	0.02 mA
28	V_S3_ELDO4(SMPS3A)	1.28 V	0.00 mA	1.29 V	-0.24 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	0.00 mA	0.00 V	-0.06 mA
55	S4_Output(VPM_S4_2P05)	1.91 V	1.19 mA	2.04 V	7.40 mA
102	L4_WTR1(SMPS4A)	0.62 V	0.00 mA	1.48 V	1.47 mA
104	L4_WTR0(SMPS4A)	0.62 V	0.00 mA	1.48 V	0.48 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA	1.80 V	0.05 mA
94	L5_PX3(SMPS4A)	1.80 V	0.37 mA	1.80 V	1.68 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	0.69 mA	1.80 V	1.22 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.04 mA	1.80 V	0.00 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.00 mA	1.80 V	0.22 mA
72	L6_CAM0_D_DO(SMPS4A)	0.02 V	0.00 mA	0.02 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	0.02 V	0.00 mA	0.02 V	0.00 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.04 mA	1.80 V	0.04 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	0.02 V	0.00 mA	0.02 V	0.00 mA
76	L6_SENSOR(SMPS4A)	0.02 V	0.00 mA	0.02 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	0.02 V	0.00 mA	0.02 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	0.02 V	0.00 mA	0.02 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.20 V	0.00 mA	1.73 V	0.02 mA
96	L7_TXDAC(SMPS4A)	1.20 V	0.00 mA	1.73 V	0.05 mA
106	USB_VDDA(SMPS4A)	1.20 V	0.00 mA	1.72 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.20 V	0.00 mA	1.72 V	1.11 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.20 V	0.00 mA	1.73 V	0.00 mA
100	V_S4_ELDO6	1.91 V	0.00 mA	2.04 V	0.18 mA
35	ELDO6_BC	0.00 V	0.00 mA	0.00 V	0.00 mA
143	CDC_VDD_PA	1.91 V	0.00 mA	2.04 V	-0.08 mA
144	CDC_VDD_CP	1.91 V	0.01 mA	2.04 V	0.12 mA
105	L13_USB_VDDA	0.00 V	0.00 mA	0.00 V	0.00 mA
118	L10_SENSOR	2.85 V	0.00 mA	2.85 V	0.00 mA

Qualcomm 2019-01-21 23:13:55 PST zk_sw@wingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	GSM sleep		GSM awake	
		Voltage (V)	Current I(mA)	Voltage (V)	Current I(mA)
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	0.03 mA	2.85 V	0.03 mA
84	L18_QFE_RF(RF 360)	0.04 V	0.00 mA	1.98 V	1.12 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.04 mA	1.80 V	3.44 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA	1.80 V	0.11 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.12 V	0.00 mA	0.12 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA	0.00 V	0.01 mA
110	L11_SDC2(MEM-SD)	0.00 V	-0.06 mA	0.00 V	-0.12 mA
97	L12_PX2	0.00 V	0.00 mA	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA	0.00 V	0.02 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA	0.00 V	0.00 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.70 V	0.02 mA	3.70 V	0.14 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.70 V	0.04 mA	3.70 V	0.19 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.70 V	0.05 mA	3.70 V	0.30 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.70 V	0.02 mA	3.70 V	0.12 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.70 V	0.07 mA	3.70 V	0.37 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.70 V	0.04 mA	3.70 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.70 V	0.00 mA	3.70 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.70 V	0.00 mA	3.70 V	0.59 mA
53	VIN_FLASH(VDOM_PMi8937)	3.60 V	0.00 mA	3.60 V	0.10 mA
54	VIN_TORCH(VDOM_PMi8937)	3.70 V	0.03 mA	3.70 V	0.23 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.70 V	0.00 mA	3.70 V	0.09 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.70 V	0.00 mA	3.70 V	0.10 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.70 V	0.02 mA	3.70 V	0.26 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA	0.11 V	0.00 mA
51	VPH_CHG_LED	3.70 V	0.00 mA	3.70 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.70 V	0.00 mA	3.70 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.70 V	0.01 mA	3.70 V	0.01 mA
111	VPH_PWR_ELDO3(VPH)	3.70 V	0.00 mA	3.70 V	0.09 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.70 V	0.03 mA	3.70 V	0.48 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.00 mA	3.70 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.70 V	0.03 mA	3.70 V	0.09 mA
50	VPH_SPKR	3.70 V	0.00 mA	3.70 V	0.00 mA
0	BATTERY (Measured)	3.70 V	2.06 mA	3.70 V	34.73 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

Table 4-8 WCDMA talk + 0 dBm, IMT (WT1)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.97 V	47.09 mA
2	S2_Output(CX)	0.95 V	52.58 mA
3	S5_6_Output(APPS)	0.00 V	0.00 mA
4		0.00 V	0.11 mA
62	S3_Output(VPM_S3_1P288)	1.30 V	99.54 mA
122	L1_WTR1(SMPS3A)	1.00 V	68.18 mA
121	L1_WTR0(SMPS3A)	1.00 V	0.03 mA
70	L19_WLAN(SMPS3A)	1.23 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	1.23 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	1.23 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	1.23 V	0.30 mA
112	L19_LBBRX(SMPS3A)	1.23 V	2.93 mA
9	L2_LPDDR(SMPS3A)	1.20 V	14.99 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.03 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.02 mA
81	L2_PX1(SMPS3A)	1.20 V	2.81 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.05 V	8.48 mA
6	L3_CDC_EBI0(SMPS3A)	1.05 V	1.43 mA
10	L3_PLL(SMPS3A)	1.05 V	0.42 mA
28	V_S3_ELDO4(SMPS3A)	1.30 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	0.00 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	39.78 mA
102	L4_WTR1(SMPS4A)	1.80 V	14.10 mA
104	L4_WTR0(SMPS4A)	1.80 V	0.04 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	1.22 mA
94	L5_PX3(SMPS4A)	1.80 V	3.34 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	3.06 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.11 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.26 mA
72	L6_CAM0_D_DO(SMPS4A)	0.13 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	0.13 V	0.00 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.05 mA

Qualcomm 2019-01-29 23:13:55 PST zk_jhewingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
75	L6_DSI_PLL(MIPI)(SMPS4A)	0.13 V	0.00 mA
76	L6_SENSOR(SMPS4A)	0.13 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	0.13 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	0.13 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.46 mA
96	L7_TXDAC(SMPS4A)	1.79 V	5.67 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	1.81 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.00 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	0.00 mA
144	CDC_VDD_CP	2.06 V	0.03 mA
105	L13_USB_VDDA	3.08 V	0.00 mA
118	L10_SENSOR	2.84 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.84 V	0.03 mA
84	L18_QFE_RF(RF 360)	2.70 V	2.18 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.04 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.61 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.70 V	4.13 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.70 V	5.08 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.70 V	0.02 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.70 V	0.01 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.70 V	0.07 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.70 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.70 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.70 V	0.02 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.70 V	0.03 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
131	VPH_PWR_DISP(VDOM_PMi8937)	3.70 V	0.00 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.70 V	0.00 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.70 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.70 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.70 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.70 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.70 V	0.00 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.69 V	1.25 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.70 V	0.01 mA
50	VPH_SPKR	3.70 V	1.16 mA
0	BATTERY (Measured)	3.70 V	109.58 mA

Table 4-9 CDMA talk + 0 dBm (CT1)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.97 V	49.63 mA
2	S2_Output(CX)	0.95 V	52.08 mA
3	S5_6_Output(APPS)	0.00 V	-0.15 mA
4		0.00 V	0.00 mA
62	S3_Output(VPM_S3_1P288)	1.30 V	89.24 mA
122	L1_WTR1(SMPS3A)	1.00 V	0.03 mA
121	L1_WTR0(SMPS3A)	1.00 V	62.32 mA
70	L19_WLAN(SMPS3A)	1.23 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	1.23 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	1.23 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	1.23 V	0.02 mA
112	L19_LBBRX(SMPS3A)	1.23 V	4.09 mA
9	L2_LPDDR(SMPS3A)	1.20 V	10.94 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.03 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.02 mA
81	L2_PX1(SMPS3A)	1.20 V	2.07 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.05 V	7.55 mA
6	L3_CDC_EBI0(SMPS3A)	1.05 V	1.15 mA
10	L3_PLL(SMPS3A)	1.05 V	0.42 mA
28	V_S3_ELDO4(SMPS3A)	1.30 V	0.00 mA

Qualcomm 2019-01-29 23:23:55 PST

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	-0.07 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	44.06 mA
102	L4_WTR1(SMPS4A)	1.80 V	0.02 mA
104	L4_WTR0(SMPS4A)	1.80 V	20.98 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	1.17 mA
94	L5_PX3(SMPS4A)	1.80 V	3.25 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	2.48 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.11 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.26 mA
72	L6_CAM0_D_DO(SMPS4A)	0.13 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	0.13 V	0.00 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.05 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	0.13 V	0.00 mA
76	L6_SENSOR(SMPS4A)	0.13 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	0.13 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	0.13 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.85 mA
96	L7_TXDAC(SMPS4A)	1.80 V	3.21 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	1.77 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.00 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	0.00 mA
144	CDC_VDD_CP	2.06 V	0.00 mA
105	L13_USB_VDDA	3.08 V	0.00 mA
118	L10_SENSOR	2.84 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.84 V	0.02 mA
84	L18_QFE_RF(RF 360)	2.70 V	2.00 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.04 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.64 V	0.01 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.70 V	1.57 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.70 V	1.97 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.70 V	0.00 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.70 V	0.00 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.70 V	0.00 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.70 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.70 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.70 V	0.04 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.70 V	0.04 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.70 V	0.00 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.70 V	0.00 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.70 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.70 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.70 V	0.01 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.70 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.70 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.69 V	1.25 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.01 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.70 V	0.01 mA
50	VPH_SPKR	3.70 V	1.13 mA
0	BATTERY (Measured)	3.70 V	102.69 mA

Table 4-10 GSM talk + 5 dBm, no DTx, PGSM (GT1)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.97 V	26.66 mA
2	S2_Output(CX)	0.95 V	56.36 mA
3	S5_6_Output(APPS)	0.00 V	0.05 mA
4		0.00 V	0.14 mA
62	S3_Output(VPM_S3_1P288)	1.30 V	45.69 mA
122	L1_WTR1(SMPS3A)	1.00 V	13.14 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
121	L1_WTR0(SMPS3A)	1.00 V	0.03 mA
70	L19_WLAN(SMPS3A)	1.23 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	1.23 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	1.23 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	1.23 V	0.01 mA
112	L19_LBBRX(SMPS3A)	1.23 V	0.71 mA
9	L2_LPDDR(SMPS3A)	1.20 V	16.11 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.02 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.02 mA
81	L2_PX1(SMPS3A)	1.20 V	7.07 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.05 V	5.90 mA
6	L3_CDC_EBI0(SMPS3A)	1.05 V	2.25 mA
10	L3_PLL(SMPS3A)	1.05 V	0.42 mA
28	V_S3_ELDO4(SMPS3A)	1.30 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	0.00 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	28.34 mA
102	L4_WTR1(SMPS4A)	1.80 V	8.06 mA
104	L4_WTR0(SMPS4A)	1.80 V	0.03 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	1.41 mA
94	L5_PX3(SMPS4A)	1.80 V	3.39 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	2.40 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.12 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.26 mA
72	L6_CAM0_D_DO(SMPS4A)	0.13 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	0.13 V	0.00 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.05 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	0.13 V	0.00 mA
76	L6_SENSOR(SMPS4A)	0.13 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	0.13 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	0.13 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.12 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.94 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	1.79 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.02 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	0.00 mA
144	CDC_VDD_CP	2.06 V	0.00 mA
105	L13_USB_VDDA	3.08 V	0.00 mA
118	L10_SENSOR	2.84 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.84 V	0.03 mA
84	L18_QFE_RF(RF 360)	2.70 V	2.41 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.05 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.60 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.70 V	5.52 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.70 V	6.94 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.70 V	0.00 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.70 V	0.02 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.70 V	0.14 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.70 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.70 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.70 V	0.00 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.70 V	0.00 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.70 V	0.00 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.70 V	0.00 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.70 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.70 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.70 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.70 V	0.01 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
111	VPH_PWR_ELDO3(VPH)	3.70 V	0.00 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.69 V	1.18 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.70 V	0.01 mA
50	VPH_SPKR	3.70 V	2.02 mA
0	BATTERY (Measured)	3.70 V	80.33 mA

Table 4-11 FDD VOLTE LISTEN

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.96 V	45.52 mA
2	S2_Output(CX)	0.95 V	56.81 mA
3	S5_6_Output(APPS)	0.00 V	0.00 mA
4		0.00 V	0.18 mA
62	S3_Output(VPM_S3_1P288)	1.30 V	52.35 mA
122	L1_WTR1(SMPS3A)	1.00 V	19.10 mA
121	L1_WTR0(SMPS3A)	1.00 V	0.02 mA
70	L19_WLAN(SMPS3A)	1.23 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	1.23 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	1.23 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	1.23 V	0.00 mA
112	L19_LBBRX(SMPS3A)	1.23 V	5.49 mA
9	L2_LPDDR(SMPS3A)	1.20 V	13.53 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.03 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.02 mA
81	L2_PX1(SMPS3A)	1.20 V	5.02 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.05 V	6.99 mA
6	L3_CDC_EBI0(SMPS3A)	1.05 V	1.86 mA
10	L3_PLL(SMPS3A)	1.05 V	0.42 mA
28	V_S3_ELDO4(SMPS3A)	1.30 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	0.00 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	33.47 mA
102	L4_WTR1(SMPS4A)	1.80 V	10.87 mA
104	L4_WTR0(SMPS4A)	1.80 V	0.04 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	1.35 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
94	L5_PX3(SMPS4A)	1.80 V	3.33 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	2.29 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.11 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.26 mA
72	L6_CAM0_D_DO(SMPS4A)	0.13 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	0.13 V	0.00 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.05 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	0.13 V	0.00 mA
76	L6_SENSOR(SMPS4A)	0.13 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	0.13 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	0.13 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.83 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.13 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	1.80 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.00 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	1.07 mA
144	CDC_VDD_CP	2.06 V	1.67 mA
105	L13_USB_VDDA	3.08 V	0.00 mA
118	L10_SENSOR	2.84 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.84 V	0.03 mA
84	L18_QFE_RF(RF 360)	2.70 V	1.69 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.05 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.53 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.69 V	0.10 mA

Qualcomm 2019-01-23 23:[illegible]:55 PST zk_sw@wingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.69 V	0.14 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.69 V	0.03 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.69 V	0.01 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.69 V	0.08 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.69 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.69 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.69 V	0.00 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.69 V	0.02 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	1.09 V	0.00 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	1.09 V	0.00 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	1.09 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.69 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.69 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.70 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.70 V	0.00 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	1.80 V	0.05 mA
130	VBATT(VDOM_VPH_LOADS)	1.09 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	1.08 V	0.00 mA
50	VPH_SPKR	3.69 V	0.00 mA
0	BATTERY (Measured)	3.70 V	79.36 mA

Table 4-12 FDD VOLTE SILENT

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.96 V	45.42 mA
2	S2_Output(CX)	0.95 V	57.91 mA
3	S5_6_Output(APPS)	0.00 V	0.06 mA
4		0.00 V	0.22 mA
62	S3_Output(VPM_S3_1P288)	1.30 V	53.28 mA
122	L1_WTR1(SMPS3A)	1.00 V	19.32 mA
121	L1_WTR0(SMPS3A)	1.00 V	0.03 mA
70	L19_WLAN(SMPS3A)	1.23 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	1.23 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	1.23 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	1.23 V	0.00 mA
112	L19_LBBRX(SMPS3A)	1.23 V	5.56 mA
9	L2_LPDDR(SMPS3A)	1.20 V	13.86 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.03 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.02 mA
81	L2_PX1(SMPS3A)	1.20 V	5.15 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.05 V	7.05 mA
6	L3_CDC_EBI0(SMPS3A)	1.05 V	1.90 mA
10	L3_PLL(SMPS3A)	1.05 V	0.42 mA
28	V_S3_ELDO4(SMPS3A)	1.30 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	0.00 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	30.08 mA
102	L4_WTR1(SMPS4A)	1.80 V	10.97 mA
104	L4_WTR0(SMPS4A)	1.80 V	0.05 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	1.35 mA
94	L5_PX3(SMPS4A)	1.80 V	3.13 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	2.34 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.11 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.26 mA
72	L6_CAM0_D_DO(SMPS4A)	0.13 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	0.13 V	0.00 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.05 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	0.13 V	0.00 mA
76	L6_SENSOR(SMPS4A)	0.13 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	0.13 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	0.13 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.84 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.13 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	1.81 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.01 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	0.00 mA
144	CDC_VDD_CP	2.06 V	0.00 mA
105	L13_USB_VDDA	3.08 V	0.00 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
118	L10_SENSOR	2.84 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.84 V	0.03 mA
84	L18_QFE_RF(RF 360)	2.70 V	1.70 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.05 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.55 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.69 V	0.12 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.69 V	0.16 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.69 V	0.09 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.69 V	0.03 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.69 V	0.16 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.69 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.70 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.69 V	0.00 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.69 V	0.04 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	1.13 V	0.00 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	1.13 V	0.00 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	1.14 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.69 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.69 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.70 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.70 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	1.79 V	0.00 mA
130	VBATT(VDOM_VPH_LOADS)	1.11 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	1.14 V	0.00 mA
50	VPH_SPKR	3.69 V	1.13 mA
0	BATTERY (Measured)	3.70 V	77.02 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

Table 4-13 FDD VOLTE TALK

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.96 V	75.93 mA
2	S2_Output(CX)	0.95 V	62.96 mA
3	S5_6_Output(APPS)	0.00 V	0.00 mA
4		0.00 V	0.17 mA
62	S3_Output(VPM_S3_1P288)	1.30 V	91.47 mA
122	L1_WTR1(SMPS3A)	1.00 V	40.58 mA
121	L1_WTR0(SMPS3A)	1.00 V	0.03 mA
70	L19_WLAN(SMPS3A)	1.23 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	1.23 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	1.23 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	1.23 V	0.01 mA
112	L19_LBBRX(SMPS3A)	1.23 V	11.73 mA
9	L2_LPDDR(SMPS3A)	1.20 V	18.71 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.03 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.03 mA
81	L2_PX1(SMPS3A)	1.20 V	8.07 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.05 V	8.70 mA
6	L3_CDC_EBI0(SMPS3A)	1.05 V	2.60 mA
10	L3_PLL(SMPS3A)	1.05 V	0.42 mA
28	V_S3_ELDO4(SMPS3A)	1.30 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	0.00 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	44.02 mA
102	L4_WTR1(SMPS4A)	1.80 V	20.28 mA
104	L4_WTR0(SMPS4A)	1.80 V	0.05 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	1.36 mA
94	L5_PX3(SMPS4A)	1.80 V	3.34 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	2.73 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.10 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.26 mA
72	L6_CAM0_D_DO(SMPS4A)	0.13 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	0.13 V	0.00 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.05 mA

Qualcomm 2019-01-29 23:12:55 PST zk_jiewingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
75	L6_DSI_PLL(MIPI)(SMPS4A)	0.13 V	0.00 mA
76	L6_SENSOR(SMPS4A)	0.13 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	0.13 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	0.13 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	1.77 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.40 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	1.83 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.00 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	1.06 mA
144	CDC_VDD_CP	2.06 V	2.20 mA
105	L13_USB_VDDA	3.08 V	0.00 mA
118	L10_SENSOR	2.84 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.84 V	0.03 mA
84	L18_QFE_RF(RF 360)	2.70 V	1.71 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.06 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.50 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.69 V	0.28 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.69 V	0.38 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.69 V	0.05 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.69 V	0.01 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.69 V	0.16 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.69 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.69 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.69 V	0.06 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.69 V	0.08 mA

Qualcomm 2015-1-23 23:13:55 PST

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
131	VPH_PWR_DISP(VDOM_PMi8937)	1.10 V	0.00 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	1.09 V	0.00 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	1.09 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.69 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.69 V	0.01 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.69 V	0.03 mA
111	VPH_PWR_ELDO3(VPH)	3.69 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	1.80 V	0.05 mA
130	VBATT(VDOM_VPH_LOADS)	1.09 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	1.09 V	0.00 mA
50	VPH_SPKR	3.69 V	0.04 mA
0	BATTERY (Measured)	3.70 V	113.36 mA

Table 4-14 TDD VOLTE LISTEN

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	1.04 V	70.57 mA
2	S2_Output(CX)	0.95 V	59.32 mA
3	S5_6_Output(APPS)	0.00 V	0.04 mA
4		0.00 V	0.21 mA
62	S3_Output(VPM_S3_1P288)	1.30 V	93.25 mA
122	L1_WTR1(SMPS3A)	1.00 V	47.84 mA
121	L1_WTR0(SMPS3A)	1.00 V	0.04 mA
70	L19_WLAN(SMPS3A)	1.23 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	1.23 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	1.23 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	1.23 V	0.02 mA
112	L19_LBBRX(SMPS3A)	1.23 V	12.58 mA
9	L2_LPDDR(SMPS3A)	1.20 V	14.07 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.02 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.02 mA
81	L2_PX1(SMPS3A)	1.20 V	5.56 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.13 V	10.27 mA
6	L3_CDC_EBI0(SMPS3A)	1.13 V	2.20 mA
10	L3_PLL(SMPS3A)	1.13 V	0.44 mA
28	V_S3_ELDO4(SMPS3A)	1.30 V	0.00 mA

Qualcomm 2019-01-23 23:13:55 PST

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	0.00 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	40.42 mA
102	L4_WTR1(SMPS4A)	1.80 V	18.06 mA
104	L4_WTR0(SMPS4A)	1.80 V	0.05 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.79 mA
94	L5_PX3(SMPS4A)	1.80 V	3.34 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	2.29 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.11 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.26 mA
72	L6_CAM0_D_DO(SMPS4A)	0.13 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	0.13 V	0.00 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.05 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	0.13 V	0.00 mA
76	L6_SENSOR(SMPS4A)	0.13 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	0.13 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	0.13 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	1.66 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.12 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	1.80 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.02 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	1.06 mA
144	CDC_VDD_CP	2.06 V	2.43 mA
105	L13_USB_VDDA	3.08 V	0.00 mA
118	L10_SENSOR	2.84 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.84 V	0.03 mA
84	L18_QFE_RF(RF 360)	2.70 V	1.91 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.05 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.71 V	0.01 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.69 V	0.37 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.69 V	0.50 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.69 V	0.04 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.69 V	0.02 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.69 V	0.17 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.69 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.69 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.69 V	0.05 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.69 V	0.06 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	1.09 V	0.00 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	1.09 V	0.00 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	1.09 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.69 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.69 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.69 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.69 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	1.80 V	0.05 mA
130	VBATT(VDOM_VPH_LOADS)	1.09 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	1.08 V	0.00 mA
50	VPH_SPKR	3.69 V	0.02 mA
0	BATTERY (Measured)	3.70 V	111.50 mA

Table 4-15 TDD VOLTE SILENT

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	1.04 V	71.09 mA
2	S2_Output(CX)	0.95 V	58.36 mA
3	S5_6_Output(APPS)	0.00 V	0.00 mA
4		0.00 V	0.18 mA
62	S3_Output(VPM_S3_1P288)	1.30 V	92.84 mA
122	L1_WTR1(SMPS3A)	1.00 V	47.88 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
121	L1_WTR0(SMPS3A)	1.00 V	0.03 mA
70	L19_WLAN(SMPS3A)	1.23 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	1.23 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	1.23 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	1.23 V	0.02 mA
112	L19_LBBRX(SMPS3A)	1.23 V	12.57 mA
9	L2_LPDDR(SMPS3A)	1.20 V	14.06 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.03 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.02 mA
81	L2_PX1(SMPS3A)	1.20 V	5.55 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.13 V	10.14 mA
6	L3_CDC_EBI0(SMPS3A)	1.13 V	2.20 mA
10	L3_PLL(SMPS3A)	1.13 V	0.43 mA
28	V_S3_ELDO4(SMPS3A)	1.30 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	0.00 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	38.53 mA
102	L4_WTR1(SMPS4A)	1.80 V	18.12 mA
104	L4_WTR0(SMPS4A)	1.80 V	0.06 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.80 mA
94	L5_PX3(SMPS4A)	1.80 V	3.14 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	2.29 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.12 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.26 mA
72	L6_CAM0_D_DO(SMPS4A)	0.13 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	0.13 V	0.00 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.05 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	0.13 V	0.00 mA
76	L6_SENSOR(SMPS4A)	0.13 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	0.13 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	0.13 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	1.66 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.13 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	1.80 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.01 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	-0.05 mA
144	CDC_VDD_CP	2.06 V	0.00 mA
105	L13_USB_VDDA	3.08 V	0.00 mA
118	L10_SENSOR	2.84 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.84 V	0.03 mA
84	L18_QFE_RF(RF 360)	2.70 V	1.91 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.05 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.53 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.69 V	0.37 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.69 V	0.41 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.69 V	0.07 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.69 V	0.01 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.69 V	0.05 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.69 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.69 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.69 V	0.01 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.69 V	0.04 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	1.09 V	0.00 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	1.09 V	0.00 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	1.09 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.69 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.69 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.69 V	0.02 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
111	VPH_PWR_ELDO3(VPH)	3.69 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	1.80 V	0.05 mA
130	VBATT(VDOM_VPH_LOADS)	1.09 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	1.08 V	0.00 mA
50	VPH_SPKR	3.69 V	1.12 mA
0	BATTERY (Measured)	3.70 V	108.44 mA

Table 4-16 TDD VOLTE TALK

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	1.06 V	94.27 mA
2	S2_Output(CX)	0.95 V	61.72 mA
3	S5_6_Output(APPS)	0.00 V	0.01 mA
4		0.00 V	0.18 mA
62	S3_Output(VPM_S3_1P288)	1.30 V	108.24 mA
122	L1_WTR1(SMPS3A)	1.00 V	49.36 mA
121	L1_WTR0(SMPS3A)	1.00 V	0.04 mA
70	L19_WLAN(SMPS3A)	1.23 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	1.23 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	1.23 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	1.23 V	0.01 mA
112	L19_LBBRX(SMPS3A)	1.22 V	19.69 mA
9	L2_LPDDR(SMPS3A)	1.20 V	16.00 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.03 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.02 mA
81	L2_PX1(SMPS3A)	1.20 V	7.20 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.16 V	12.17 mA
6	L3_CDC_EBI0(SMPS3A)	1.16 V	2.63 mA
10	L3_PLL(SMPS3A)	1.16 V	0.44 mA
28	V_S3_ELDO4(SMPS3A)	1.30 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	0.00 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	41.18 mA
102	L4_WTR1(SMPS4A)	1.80 V	16.49 mA
104	L4_WTR0(SMPS4A)	1.80 V	0.06 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.80 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
94	L5_PX3(SMPS4A)	1.80 V	3.35 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	2.46 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.13 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.26 mA
72	L6_CAM0_D_DO(SMPS4A)	0.13 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	0.13 V	0.00 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.05 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	0.13 V	0.00 mA
76	L6_SENSOR(SMPS4A)	0.13 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	0.13 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	0.13 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.79 V	2.63 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.33 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.01 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	1.83 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.02 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	1.09 mA
144	CDC_VDD_CP	2.06 V	1.15 mA
105	L13_USB_VDDA	3.08 V	0.00 mA
118	L10_SENSOR	2.84 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.84 V	0.03 mA
84	L18_QFE_RF(RF 360)	2.70 V	1.91 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.05 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.56 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.01 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.69 V	0.49 mA

Qualcomm 2019-01-23 23:[illegible]:55 PST zk_sw@wingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.69 V	0.62 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.69 V	0.06 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.69 V	0.01 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.69 V	0.08 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.69 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.69 V	0.01 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.69 V	0.05 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.69 V	0.03 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	1.09 V	0.00 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	1.09 V	0.00 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	1.09 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.69 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.69 V	0.01 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.69 V	0.03 mA
111	VPH_PWR_ELDO3(VPH)	3.69 V	0.02 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	1.80 V	0.05 mA
130	VBATT(VDOM_VPH_LOADS)	1.09 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	1.08 V	0.00 mA
50	VPH_SPKR	3.69 V	0.00 mA
0	BATTERY (Measured)	3.70 V	127.06 mA

Table 4-17 FDD LTE Cat3 2xCA 10+10 MHz, 0 dBm, 100/25 Mbps, B1+B3 (LTE8E)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	1.14 V	394.84 mA
2	S2_Output(CX)	0.95 V	66.87 mA
3	S5_6_Output(APPS)	1.07 V	111.78 mA
4		1.07 V	0.20 mA
62	S3_Output(VPM_S3_1P288)	1.28 V	264.42 mA
122	L1_WTR1(SMPS3A)	0.99 V	71.08 mA
121	L1_WTR0(SMPS3A)	1.00 V	29.08 mA
70	L19_WLAN(SMPS3A)	1.23 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	1.23 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	1.23 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	1.23 V	0.30 mA
112	L19_LBBRX(SMPS3A)	1.22 V	30.09 mA
9	L2_LPDDR(SMPS3A)	1.20 V	53.96 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.03 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.02 mA
81	L2_PX1(SMPS3A)	1.20 V	21.96 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.22 V	47.18 mA
6	L3_CDC_EBI0(SMPS3A)	1.22 V	9.58 mA
10	L3_PLL(SMPS3A)	1.22 V	0.00 mA
28	V_S3_ELDO4(SMPS3A)	1.28 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	-0.05 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	111.88 mA
102	L4_WTR1(SMPS4A)	1.79 V	58.57 mA
104	L4_WTR0(SMPS4A)	1.79 V	23.62 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	1.59 mA
94	L5_PX3(SMPS4A)	1.80 V	1.97 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	5.08 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.11 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.26 mA
72	L6_CAM0_D_DO(SMPS4A)	0.13 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	0.13 V	0.00 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.05 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	0.13 V	0.00 mA
76	L6_SENSOR(SMPS4A)	0.13 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	0.13 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	0.13 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.79 V	4.53 mA
96	L7_TXDAC(SMPS4A)	1.79 V	5.68 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.79 V	2.27 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.02 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	-0.07 mA
144	CDC_VDD_CP	2.06 V	-0.09 mA
105	L13_USB_VDDA	0.00 V	0.00 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
118	L10_SENSOR	2.84 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.84 V	0.03 mA
84	L18_QFE_RF(RF 360)	2.70 V	2.03 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.06 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.55 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.68 V	7.93 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.68 V	9.64 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.68 V	0.05 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.68 V	0.00 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.68 V	0.05 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.68 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.68 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.68 V	0.02 mA
53	VIN_FLASH(VDOM_PMi8937)	3.47 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.68 V	0.02 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	1.09 V	0.00 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	1.09 V	0.00 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	1.09 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.68 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.68 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.68 V	0.01 mA
111	VPH_PWR_ELDO3(VPH)	3.68 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	1.80 V	0.04 mA
130	VBATT(VDOM_VPH_LOADS)	1.09 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	1.08 V	0.00 mA
50	VPH_SPKR	3.68 V	0.00 mA
0	BATTERY (Measured)	3.69 V	392.45 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

Table 4-18 Embedded FDD LTE Cat 3 DL + UL (68/23 Mbps) 0 dBm,10 MHz BW, MIMO Band 1 (LTE1E)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	1.03 V	211.11 mA
2	S2_Output(CX)	0.95 V	62.59 mA
3	S5_6_Output(APPS)	1.08 V	92.70 mA
4		1.08 V	0.09 mA
62	S3_Output(VPM_S3_1P288)	1.29 V	221.97 mA
122	L1_WTR1(SMPS3A)	0.99 V	108.73 mA
121	L1_WTR0(SMPS3A)	1.00 V	0.03 mA
70	L19_WLAN(SMPS3A)	1.23 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	1.23 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	1.23 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	1.23 V	0.01 mA
112	L19_LBBRX(SMPS3A)	1.23 V	15.04 mA
9	L2_LPDDR(SMPS3A)	1.20 V	46.23 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.02 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.02 mA
81	L2_PX1(SMPS3A)	1.20 V	19.53 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.10 V	23.75 mA
6	L3_CDC_EBI0(SMPS3A)	1.10 V	7.54 mA
10	L3_PLL(SMPS3A)	1.10 V	0.00 mA
28	V_S3_ELDO4(SMPS3A)	1.29 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	-0.05 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	55.11 mA
102	L4_WTR1(SMPS4A)	1.79 V	28.04 mA
104	L4_WTR0(SMPS4A)	1.80 V	0.03 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	1.51 mA
94	L5_PX3(SMPS4A)	1.80 V	1.98 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	4.55 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.11 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.26 mA
72	L6_CAM0_D_DO(SMPS4A)	0.13 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	0.13 V	0.00 mA

Qualcomm 2019-01-29 23:13:55 PST zhaow@wingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
74	L5_TS_IO(SMPS4A)	1.80 V	0.05 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	0.13 V	0.00 mA
76	L6_SENSOR(SMPS4A)	0.13 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	0.13 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	0.13 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	2.27 mA
96	L7_TXDAC(SMPS4A)	1.79 V	5.68 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	2.17 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.00 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	0.00 mA
144	CDC_VDD_CP	2.06 V	0.01 mA
105	L13_USB_VDDA	0.00 V	0.00 mA
118	L10_SENSOR	2.84 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.84 V	0.03 mA
84	L18_QFE_RF(RF 360)	2.70 V	2.17 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.05 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.63 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.69 V	4.70 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.69 V	5.93 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.69 V	0.03 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.69 V	0.00 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.69 V	0.00 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.69 V	0.05 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.69 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.69 V	0.02 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.00 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
54	VIN_TORCH(VDOM_PMi8937)	3.69 V	0.05 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.69 V	0.00 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.69 V	0.00 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.69 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.69 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.69 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.69 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.69 V	0.00 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.69 V	1.21 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.69 V	0.01 mA
50	VPH_SPKR	3.69 V	0.01 mA
0	BATTERY (Measured)	3.70 V	253.58 mA

Table 4-19 Embedded FDD LTE CAT4 (20 MHz, 150/50 Mbps) Band 1 (LTE7E)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	1.09 V	359.76 mA
2	S2_Output(CX)	0.95 V	66.75 mA
3	S5_6_Output(APPS)	1.08 V	163.06 mA
4		1.08 V	0.28 mA
62	S3_Output(VPM_S3_1P288)	1.29 V	270.45 mA
122	L1_WTR1(SMPS3A)	0.99 V	108.77 mA
121	L1_WTR0(SMPS3A)	1.00 V	0.03 mA
70	L19_WLAN(SMPS3A)	1.23 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	1.23 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	1.23 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	1.23 V	0.01 mA
112	L19_LBBRX(SMPS3A)	1.22 V	31.11 mA
9	L2_LPDDR(SMPS3A)	1.20 V	56.78 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.02 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.02 mA
81	L2_PX1(SMPS3A)	1.20 V	22.39 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.16 V	41.18 mA
6	L3_CDC_EBI0(SMPS3A)	1.16 V	9.21 mA

Qualcomm 2019-01-29 23:12:55 PST ZK_sw@wingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
10	L3_PLL(SMPS3A)	1.16 V	0.00 mA
28	V_S3_ELDO4(SMPS3A)	1.29 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	0.00 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	56.91 mA
102	L4_WTR1(SMPS4A)	1.79 V	28.09 mA
104	L4_WTR0(SMPS4A)	1.80 V	0.03 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	1.51 mA
94	L5_PX3(SMPS4A)	1.80 V	2.00 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	5.22 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.11 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.26 mA
72	L6_CAM0_D_DO(SMPS4A)	0.13 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	0.13 V	0.00 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.05 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	0.13 V	0.00 mA
76	L6_SENSOR(SMPS4A)	0.13 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	0.13 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	0.13 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.79 V	3.56 mA
96	L7_TXDAC(SMPS4A)	1.79 V	5.68 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	2.31 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.00 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	0.00 mA
144	CDC_VDD_CP	2.06 V	0.01 mA
105	L13_USB_VDDA	0.00 V	0.00 mA
118	L10_SENSOR	2.84 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.84 V	0.03 mA
84	L18_QFE_RF(RF 360)	2.70 V	2.18 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.05 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
88	L9_WCN[WCN3680]	0.60 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.69 V	5.02 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.69 V	6.28 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.69 V	0.07 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.69 V	0.01 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.69 V	0.08 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.69 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.69 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.69 V	0.03 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.69 V	0.04 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.69 V	0.00 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.69 V	0.00 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.69 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.69 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.69 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.69 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.69 V	0.00 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.68 V	1.29 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.69 V	0.01 mA
50	VPH_SPKR	3.69 V	0.02 mA
0	BATTERY (Measured)	3.70 V	354.09 mA

Table 4-20 HSDPA downlink 7.2 Mbps + 0 dBm, IMT (RxD) (HS22E)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.97 V	105.68 mA
2	S2_Output(CX)	0.95 V	53.15 mA
3	S5_6_Output(APPS)	1.08 V	22.15 mA
4		1.08 V	0.11 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
62	S3_Output(VPM_S3_1P288)	1.30 V	130.85 mA
122	L1_WTR1(SMPS3A)	0.99 V	82.57 mA
121	L1_WTR0(SMPS3A)	1.00 V	0.03 mA
70	L19_WLAN(SMPS3A)	1.23 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	1.23 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	1.23 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	1.23 V	0.29 mA
112	L19_LBBRX(SMPS3A)	1.23 V	9.63 mA
9	L2_LPDDR(SMPS3A)	1.20 V	16.06 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.03 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.02 mA
81	L2_PX1(SMPS3A)	1.20 V	8.33 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.05 V	10.71 mA
6	L3_CDC_EBI0(SMPS3A)	1.05 V	2.67 mA
10	L3_PLL(SMPS3A)	1.05 V	0.00 mA
28	V_S3_ELDO4(SMPS3A)	1.30 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	0.00 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	44.77 mA
102	L4_WTR1(SMPS4A)	1.79 V	21.16 mA
104	L4_WTR0(SMPS4A)	1.80 V	0.03 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	1.53 mA
94	L5_PX3(SMPS4A)	1.80 V	2.02 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	3.15 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.11 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.26 mA
72	L6_CAM0_D_DO(SMPS4A)	0.13 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	0.13 V	0.00 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.05 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	0.13 V	0.00 mA
76	L6_SENSOR(SMPS4A)	0.13 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	0.13 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	0.13 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	1.77 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
96	L7_TXDAC(SMPS4A)	1.79 V	5.68 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	1.90 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.01 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	0.01 mA
144	CDC_VDD_CP	2.06 V	0.00 mA
105	L13_USB_VDDA	0.00 V	0.00 mA
118	L10_SENSOR	2.84 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.84 V	0.03 mA
84	L18_QFE_RF(RF 360)	2.70 V	2.14 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.05 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.61 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.70 V	4.28 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.70 V	5.29 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.70 V	0.03 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.70 V	0.00 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.70 V	0.03 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.70 V	0.05 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.70 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.70 V	0.10 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.70 V	0.03 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.70 V	0.00 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.70 V	0.00 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.70 V	0.02 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.70 V	0.00 mA

Qualcomm 2019-01-29 23:13:55 PST

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
67	VPH_PWR_EXT_LCD_BIAS	3.70 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.70 V	0.01 mA
111	VPH_PWR_ELDO3(VPH)	3.70 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.69 V	0.96 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.70 V	0.01 mA
50	VPH_SPKR	3.70 V	0.00 mA
0	BATTERY (Measured)	3.70 V	148.98 mA

Table 4-21 DC HSDPA downlink 42 Mbps + 0 dBm, IMT (No RxD) (HS61E)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.97 V	104.76 mA
2	S2_Output(CX)	0.95 V	55.13 mA
3	S5_6_Output(APPS)	1.08 V	41.52 mA
4		1.08 V	0.15 mA
62	S3_Output(VPM_S3_1P288)	1.30 V	132.44 mA
122	L1_WTR1(SMPS3A)	1.00 V	75.24 mA
121	L1_WTR0(SMPS3A)	1.00 V	0.03 mA
70	L19_WLAN(SMPS3A)	1.23 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	1.23 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	1.23 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	1.23 V	0.01 mA
112	L19_LBBRX(SMPS3A)	1.23 V	7.37 mA
9	L2_LPDDR(SMPS3A)	1.20 V	20.97 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.03 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.02 mA
81	L2_PX1(SMPS3A)	1.20 V	11.21 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.05 V	13.51 mA
6	L3_CDC_EBI0(SMPS3A)	1.05 V	3.81 mA
10	L3_PLL(SMPS3A)	1.05 V	0.00 mA
28	V_S3_ELDO4(SMPS3A)	1.30 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	0.00 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	46.85 mA
102	L4_WTR1(SMPS4A)	1.79 V	23.88 mA
104	L4_WTR0(SMPS4A)	1.80 V	0.03 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	1.22 mA
94	L5_PX3(SMPS4A)	1.80 V	2.01 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	3.17 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.11 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.26 mA
72	L6_CAM0_D_DO(SMPS4A)	0.13 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	0.13 V	0.00 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.06 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	0.13 V	0.00 mA
76	L6_SENSOR(SMPS4A)	0.13 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	0.13 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	0.13 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	1.12 mA
96	L7_TXDAC(SMPS4A)	1.79 V	5.68 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	1.98 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.00 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	0.00 mA
144	CDC_VDD_CP	2.06 V	0.00 mA
105	L13_USB_VDDA	0.00 V	0.00 mA
118	L10_SENSOR	2.84 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.84 V	0.03 mA
84	L18_QFE_RF(RF 360)	2.70 V	2.12 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.04 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.69 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA

Qualcomm 2019-[illegible] 23:13:55 PST zk_sw@xiaomi.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.70 V	3.88 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.70 V	4.88 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.70 V	0.07 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.70 V	0.01 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.70 V	0.08 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.70 V	0.05 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.70 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.70 V	0.01 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.70 V	0.03 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.70 V	0.00 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.70 V	0.00 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.70 V	0.01 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.70 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.70 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.70 V	0.01 mA
111	VPH_PWR_ELDO3(VPH)	3.70 V	0.00 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.69 V	0.97 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.70 V	0.01 mA
50	VPH_SPKR	3.70 V	0.00 mA
0	BATTERY (Measured)	3.70 V	157.14 mA

Table 4-22 MP3 playback 128 kbps (Offload mode – DSP audio codec) (AU4A)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	0.01 mA
2	S2_Output(CX)	0.94 V	25.96 mA
3	S5_6_Output(APPS)	0.06 V	1.25 mA
4		0.06 V	0.12 mA
62	S3_Output(VPM_S3_1P288)	1.27 V	7.34 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.00 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA
9	L2_LPDDR(SMPS3A)	1.20 V	2.81 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.03 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.02 mA
81	L2_PX1(SMPS3A)	1.20 V	0.45 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.05 V	3.21 mA
6	L3_CDC_EBI0(SMPS3A)	1.05 V	0.52 mA
10	L3_PLL(SMPS3A)	1.05 V	0.44 mA
28	V_S3_ELDO4(SMPS3A)	1.27 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	0.00 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	14.91 mA
102	L4_WTR1(SMPS4A)	0.09 V	0.00 mA
104	L4_WTR0(SMPS4A)	0.09 V	0.01 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA
94	L5_PX3(SMPS4A)	1.80 V	3.27 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	0.99 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.12 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.25 mA
72	L6_CAM0_D_DO(SMPS4A)	0.14 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	0.14 V	0.00 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.05 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	0.14 V	0.00 mA
76	L6_SENSOR(SMPS4A)	0.14 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	0.14 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	0.14 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.00 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.06 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	0.10 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.01 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	1.92 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
144	CDC_VDD_CP	2.06 V	2.24 mA
105	L13_USB_VDDA	3.08 V	0.01 mA
118	L10_SENSOR	2.85 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	0.03 mA
84	L18_QFE_RF(RF 360)	0.00 V	0.00 mA
91	V_L14_UICC1_IN(MEMORY)	1.79 V	0.04 mA
95	L14_PX5_DUAL	1.79 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.12 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.70 V	0.03 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.70 V	0.04 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.70 V	0.05 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.70 V	0.01 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.70 V	0.11 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.70 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.70 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.70 V	0.06 mA
53	VIN_FLASH(VDOM_PMi8937)	3.57 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.70 V	0.04 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.70 V	0.00 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.70 V	0.00 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.70 V	0.02 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.70 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.70 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.70 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.70 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.69 V	0.81 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.70 V	0.01 mA
50	VPH_SPKR	3.70 V	0.00 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
0	BATTERY (Measured)	3.70 V	22.01 mA

Table 4-23 H.264 720p decode, 30 fps (QTC77A)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	0.01 mA
2	S2_Output(CX)	0.94 V	114.00 mA
3	S5_6_Output(APPS)	0.87 V	55.52 mA
4		0.87 V	0.29 mA
62	S3_Output(VPM_S3_1P288)	1.27 V	72.47 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.00 mA
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA
9	L2_LPDDR(SMPS3A)	1.20 V	31.88 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.02 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	9.33 mA
81	L2_PX1(SMPS3A)	1.20 V	13.08 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.05 V	13.12 mA
6	L3_CDC_EBI0(SMPS3A)	1.05 V	4.41 mA
10	L3_PLL(SMPS3A)	1.05 V	1.07 mA
28	V_S3_ELDO4(SMPS3A)	1.27 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	-0.06 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	46.85 mA
102	L4_WTR1(SMPS4A)	0.09 V	0.00 mA
104	L4_WTR0(SMPS4A)	0.09 V	0.00 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA
94	L5_PX3(SMPS4A)	1.80 V	3.34 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	3.32 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	1.55 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
124	VDD_MSM_IO(SMPS4A)	1.79 V	1.41 mA
72	L6_CAM0_D_DO(SMPS4A)	1.80 V	0.01 mA
73	L6_LCD_IO(SMPS4A)	1.79 V	22.41 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.40 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	1.80 V	2.33 mA
76	L6_SENSOR(SMPS4A)	1.80 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	1.80 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	1.80 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.00 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.06 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	1.08 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.00 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	2.10 mA
144	CDC_VDD_CP	2.06 V	2.48 mA
105	L13_USB_VDDA	3.08 V	0.01 mA
118	L10_SENSOR	2.85 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	2.09 mA
84	L18_QFE_RF(RF 360)	0.00 V	0.00 mA
91	V_L14_UICC1_IN(MEMORY)	1.79 V	0.04 mA
95	L14_PX5_DUAL	1.79 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.24 V	0.01 mA
16	L8_EMMC[MEMORY]	2.90 V	0.30 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	2.85 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	2.85 V	1.21 mA
27	L17_CAM1_ACT[CAMERA]	2.85 V	0.56 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.69 V	0.03 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.69 V	0.03 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.69 V	0.00 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.69 V	0.02 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.69 V	0.12 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.69 V	0.04 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.69 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.69 V	84.03 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.69 V	0.02 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.65 V	13.43 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.64 V	16.63 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.69 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.69 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.69 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.69 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.69 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.69 V	1.01 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.01 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.69 V	0.11 mA
50	VPH_SPKR	3.69 V	0.01 mA
0	BATTERY (Measured)	3.70 V	229.14 mA
	Battery Adjusted Value	3.70 V	95.62 mA

Table 4-24 H.264 1080p decode, 30 fps (QTC88A)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	0.02 mA
2	S2_Output(CX)	0.94 V	127.00 mA
3	S5_6_Output(APPS)	0.95 V	58.39 mA
4		0.95 V	0.23 mA
62	S3_Output(VPM_S3_1P288)	1.27 V	106.24 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.01 mA
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA
9	L2_LPDDR(SMPS3A)	1.20 V	51.05 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.03 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	9.33 mA
81	L2_PX1(SMPS3A)	1.20 V	19.65 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.05 V	18.30 mA
6	L3_CDC_EBI0(SMPS3A)	1.05 V	6.63 mA
10	L3_PLL(SMPS3A)	1.05 V	1.07 mA
28	V_S3_ELDO4(SMPS3A)	1.27 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	-0.05 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	49.66 mA
102	L4_WTR1(SMPS4A)	0.09 V	0.00 mA
104	L4_WTR0(SMPS4A)	0.09 V	0.01 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA
94	L5_PX3(SMPS4A)	1.80 V	3.38 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	4.74 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	2.67 mA
124	VDD_MSM_IO(SMPS4A)	1.79 V	1.41 mA
72	L6_CAM0_D_DO(SMPS4A)	1.80 V	0.01 mA
73	L6_LCD_IO(SMPS4A)	1.79 V	23.02 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.40 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	1.80 V	2.33 mA
76	L6_SENSOR(SMPS4A)	1.80 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	1.80 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	1.80 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.00 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.06 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	1.08 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.00 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	2.09 mA
144	CDC_VDD_CP	2.06 V	2.49 mA
105	L13_USB_VDDA	3.08 V	0.01 mA
118	L10_SENSOR	2.85 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	2.10 mA
84	L18_QFE_RF(RF 360)	0.00 V	0.00 mA
91	V_L14_UICC1_IN(MEMORY)	1.79 V	0.05 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
95	L14_PX5_DUAL	1.79 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.24 V	0.02 mA
16	L8_EMMC[MEMORY]	2.90 V	0.53 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	2.85 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	2.85 V	1.22 mA
27	L17_CAM1_ACT[CAMERA]	2.85 V	0.56 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.69 V	0.03 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.69 V	0.02 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.69 V	0.03 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.69 V	0.01 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.69 V	0.13 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.69 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.69 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.69 V	84.12 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.07 mA
54	VIN_TORCH(VDOM_PMi8937)	3.69 V	0.03 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.65 V	13.41 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.64 V	16.65 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.69 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.69 V	0.01 mA
67	VPH_PWR_EXT_LCD_BIAS	3.69 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.69 V	0.01 mA
111	VPH_PWR_ELDO3(VPH)	3.69 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.69 V	1.05 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.01 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.69 V	0.11 mA
50	VPH_SPKR	3.69 V	0.02 mA
0	BATTERY (Measured)	3.70 V	249.77 mA
	Battery Adjusted Value	3.70 V	114.81 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

Table 4-25 16 MP ZSL camera preview, 30 fps (QMC38A-1)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	0.00 mA
2	S2_Output(CX)	1.01 V	332.63 mA
3	S5_6_Output(APPS)	0.94 V	124.77 mA
4		0.94 V	0.17 mA
62	S3_Output(VPM_S3_1P288)	1.26 V	450.39 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.02 mA
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA
9	L2_LPDDR(SMPS3A)	1.20 V	71.12 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.19 V	12.57 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	9.02 mA
81	L2_PX1(SMPS3A)	1.20 V	36.96 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.09 V	73.44 mA
6	L3_CDC_EBI0(SMPS3A)	1.08 V	15.12 mA
10	L3_PLL(SMPS3A)	1.09 V	0.64 mA
28	V_S3_ELDO4(SMPS3A)	1.25 V	230.21 mA
26	ELDO4_CAM0_D(SMPS3A)	1.09 V	230.38 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	47.98 mA
102	L4_WTR1(SMPS4A)	0.09 V	0.00 mA
104	L4_WTR0(SMPS4A)	0.09 V	0.01 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA
94	L5_PX3(SMPS4A)	1.80 V	8.99 mA
98	L5_DDR_VDD1(SMPS4A)	1.79 V	5.72 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.11 mA
124	VDD_MSM_IO(SMPS4A)	1.79 V	1.41 mA
72	L6_CAM0_D_DO(SMPS4A)	1.80 V	1.91 mA
73	L6_LCD_IO(SMPS4A)	1.79 V	21.49 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.40 mA

Qualcomm
2019-01-29 23:13:55 PST
zk_jnewingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
75	L6_DSI_PLL(MIPI)(SMPS4A)	1.79 V	2.34 mA
76	L6_SENSOR(SMPS4A)	1.80 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	1.80 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	1.80 V	0.22 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.00 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.06 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	1.43 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.00 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	0.01 mA
144	CDC_VDD_CP	2.06 V	0.02 mA
105	L13_USB_VDDA	0.00 V	0.00 mA
118	L10_SENSOR	2.85 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	2.09 mA
84	L18_QFE_RF(RF 360)	0.00 V	0.01 mA
91	V_L14_UICC1_IN(MEMORY)	1.79 V	0.05 mA
95	L14_PX5_DUAL	1.79 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.12 V	0.02 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	2.85 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	2.85 V	19.81 mA
27	L17_CAM1_ACT[CAMERA]	2.85 V	8.85 mA
40	L22_CAM1[CAMERA]	2.81 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.68 V	0.14 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.68 V	0.00 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.68 V	0.07 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.68 V	0.00 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.68 V	0.03 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.68 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.68 V	0.17 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.68 V	84.23 mA
53	VIN_FLASH(VDOM_PMi8937)	3.47 V	0.12 mA
54	VIN_TORCH(VDOM_PMi8937)	3.68 V	0.06 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
131	VPH_PWR_DISP(VDOM_PMi8937)	3.64 V	13.19 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.63 V	16.37 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.68 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.68 V	0.01 mA
67	VPH_PWR_EXT_LCD_BIAS	3.68 V	0.01 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.68 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.66 V	45.59 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.68 V	0.97 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.01 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.68 V	0.11 mA
50	VPH_SPKR	3.68 V	0.04 mA
0	BATTERY (Measured)	3.70 V	544.21 mA
	Battery Adjusted Value	3.70 V	251.25 mA

Table 4-26 16 MP ZSL camera snapshot (QMC55A)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	0.00 mA
2	S2_Output(CX)	1.01 V	354.33 mA
3	S5_6_Output(APPS)	1.00 V	154.67 mA
4		1.00 V	2.70 mA
62	S3_Output(VPM_S3_1P288)	1.27 V	465.83 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.00 mA
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA
9	L2_LPDDR(SMPS3A)	1.20 V	76.99 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.19 V	12.58 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	8.89 mA
81	L2_PX1(SMPS3A)	1.20 V	38.49 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.10 V	76.71 mA
6	L3_CDC_EBI0(SMPS3A)	1.09 V	18.10 mA
10	L3_PLL(SMPS3A)	1.10 V	0.80 mA

Qualcomm 2019-01-2 3:13:3 PST zk_sw@wingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
28	V_S3_ELDO4(SMPS3A)	1.25 V	231.75 mA
26	ELDO4_CAM0_D(SMPS3A)	1.09 V	231.92 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	50.90 mA
102	L4_WTR1(SMPS4A)	0.09 V	0.00 mA
104	L4_WTR0(SMPS4A)	0.09 V	0.01 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA
94	L5_PX3(SMPS4A)	1.80 V	9.98 mA
98	L5_DDR_VDD1(SMPS4A)	1.79 V	6.19 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.24 mA
124	VDD_MSM_IO(SMPS4A)	1.79 V	1.41 mA
72	L6_CAM0_D_DO(SMPS4A)	1.80 V	1.91 mA
73	L6_LCD_IO(SMPS4A)	1.79 V	21.55 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.92 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	1.79 V	2.34 mA
76	L6_SENSOR(SMPS4A)	1.80 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	1.80 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	1.80 V	0.22 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.00 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.06 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	1.76 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.00 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	0.00 mA
144	CDC_VDD_CP	2.06 V	0.00 mA
105	L13_USB_VDDA	0.00 V	0.00 mA
118	L10_SENSOR	2.85 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	7.09 mA
84	L18_QFE_RF(RF 360)	0.00 V	0.00 mA
91	V_L14_UICC1_IN(MEMORY)	1.79 V	0.04 mA
95	L14_PX5_DUAL	1.79 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.12 V	0.00 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
16	L8_EMMC[MEMORY]	1.77 V	0.05 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	2.85 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	2.85 V	19.72 mA
27	L17_CAM1_ACT[CAMERA]	2.85 V	8.83 mA
40	L22_CAM1[CAMERA]	2.81 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.68 V	0.13 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.68 V	0.00 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.68 V	0.04 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.68 V	0.00 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.68 V	0.06 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.68 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.68 V	0.17 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.68 V	84.12 mA
53	VIN_FLASH(VDOM_PMi8937)	3.47 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.68 V	0.04 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.64 V	13.19 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.63 V	16.37 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.68 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.68 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.68 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.68 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.66 V	45.52 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.68 V	1.09 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.01 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.68 V	0.11 mA
50	VPH_SPKR	3.68 V	1.23 mA
0	BATTERY (Measured)	3.70 V	576.62 mA
	Battery Adjusted Value	3.70 V	278.51 mA

Table 4-27 1080p Encode (16:9 MP sensor), 30 fps (QMC31A-1)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	0.00 mA
2	S2_Output(CX)	1.05 V	461.06 mA
3	S5_6_Output(APPS)	1.03 V	151.37 mA
4		1.03 V	0.24 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
62	S3_Output(VPM_S3_1P288)	1.27 V	552.08 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.00 mA
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA
9	L2_LPDDR(SMPS3A)	1.20 V	115.41 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.07 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	12.63 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	9.00 mA
81	L2_PX1(SMPS3A)	1.20 V	41.59 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.15 V	104.79 mA
6	L3_CDC_EBI0(SMPS3A)	1.14 V	34.18 mA
10	L3_PLL(SMPS3A)	1.15 V	1.10 mA
28	V_S3_ELDO4(SMPS3A)	1.25 V	231.91 mA
26	ELDO4_CAM0_D(SMPS3A)	1.09 V	232.08 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	60.43 mA
102	L4_WTR1(SMPS4A)	0.09 V	0.00 mA
104	L4_WTR0(SMPS4A)	0.09 V	0.02 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA
94	L5_PX3(SMPS4A)	1.80 V	14.17 mA
98	L5_DDR_VDD1(SMPS4A)	1.79 V	8.16 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	1.36 mA
124	VDD_MSM_IO(SMPS4A)	1.79 V	1.41 mA
72	L6_CAM0_D_DO(SMPS4A)	1.80 V	1.92 mA
73	L6_LCD_IO(SMPS4A)	1.79 V	22.64 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.40 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	1.79 V	2.34 mA
76	L6_SENSOR(SMPS4A)	1.80 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	1.80 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	1.80 V	0.22 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.00 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
96	L7_TXDAC(SMPS4A)	1.80 V	0.06 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.79 V	2.62 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.01 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	0.00 mA
144	CDC_VDD_CP	2.06 V	0.02 mA
105	L13_USB_VDDA	3.07 V	0.00 mA
118	L10_SENSOR	2.85 V	0.01 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	2.09 mA
84	L18_QFE_RF(RF 360)	0.00 V	0.00 mA
91	V_L14_UICC1_IN(MEMORY)	1.79 V	0.04 mA
95	L14_PX5_DUAL	1.79 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.12 V	0.00 mA
16	L8_EMMC[MEMORY]	1.86 V	0.68 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	2.85 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	2.85 V	25.23 mA
27	L17_CAM1_ACT[CAMERA]	2.84 V	11.30 mA
40	L22_CAM1[CAMERA]	2.81 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.68 V	0.13 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.68 V	0.00 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.68 V	0.01 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.68 V	0.00 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.68 V	0.07 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.68 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.68 V	0.17 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.67 V	84.17 mA
53	VIN_FLASH(VDOM_PMi8937)	3.47 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.68 V	0.04 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.64 V	13.22 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.63 V	16.42 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.68 V	0.02 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.68 V	0.00 mA

Qualcomm 2019-01-29 23:13:55 PST

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
67	VPH_PWR_EXT_LCD_BIAS	3.68 V	0.01 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.68 V	0.01 mA
111	VPH_PWR_ELDO3(VPH)	3.66 V	45.61 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.67 V	1.12 mA
130	VBATT(VDOM_VPH_LOADS)	3.69 V	0.01 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.68 V	0.11 mA
50	VPH_SPKR	3.68 V	0.03 mA
0	BATTERY (Measured)	3.70 V	663.01 mA
	Battery Adjusted Value	3.70 V	357.47 mA

Table 4-28 3D Game, WSVGA, 30 fps (Egypt HD) (QGC26A)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	0.03 mA
2	S2_Output(CX)	1.17 V	478.42 mA
3	S5_6_Output(APPS)	1.07 V	116.65 mA
4		1.07 V	0.19 mA
62	S3_Output(VPM_S3_1P288)	1.40 V	326.50 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.01 mA
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA
9	L2_LPDDR(SMPS3A)	1.22 V	159.05 mA
21	L2_USB_DVDD(SMPS3A)	1.22 V	0.07 mA
79	L2_CSI_MIPI(SMPS3A)	1.22 V	0.03 mA
80	L2_DSI_MIPI(SMPS3A)	1.22 V	8.36 mA
81	L2_PX1(SMPS3A)	1.22 V	36.68 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.30 V	68.19 mA
6	L3_CDC_EBI0(SMPS3A)	1.28 V	53.56 mA
10	L3_PLL(SMPS3A)	1.30 V	0.67 mA
28	V_S3_ELDO4(SMPS3A)	1.40 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	-0.05 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	55.32 mA
102	L4_WTR1(SMPS4A)	0.09 V	0.00 mA
104	L4_WTR0(SMPS4A)	0.09 V	0.01 mA

Qualcomm 2019-01-29 23:13:55 PST Approved by wingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA
94	L5_PX3(SMPS4A)	1.80 V	12.00 mA
98	L5_DDR_VDD1(SMPS4A)	1.79 V	8.00 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.11 mA
124	VDD_MSM_IO(SMPS4A)	1.79 V	1.27 mA
72	L6_CAM0_D_DO(SMPS4A)	1.80 V	0.02 mA
73	L6_LCD_IO(SMPS4A)	1.79 V	23.44 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.40 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	1.79 V	2.34 mA
76	L6_SENSOR(SMPS4A)	1.80 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	1.80 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	1.80 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.00 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.06 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.79 V	3.80 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.01 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	0.00 mA
144	CDC_VDD_CP	2.06 V	0.02 mA
105	L13_USB_VDDA	0.00 V	0.00 mA
118	L10_SENSOR	2.85 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	2.09 mA
84	L18_QFE_RF(RF 360)	0.00 V	0.00 mA
91	V_L14_UICC1_IN(MEMORY)	1.79 V	0.05 mA
95	L14_PX5_DUAL	1.79 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.11 V	0.01 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	2.85 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	2.85 V	1.22 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
27	L17_CAM1_ACT[CAMERA]	2.85 V	0.56 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.68 V	0.04 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.68 V	0.05 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.68 V	0.07 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.68 V	0.03 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.68 V	0.16 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.68 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.68 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.67 V	227.51 mA
53	VIN_FLASH(VDOM_PMi8937)	3.47 V	0.05 mA
54	VIN_TORCH(VDOM_PMi8937)	3.68 V	0.05 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.64 V	13.26 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.63 V	16.10 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.68 V	0.02 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.68 V	0.01 mA
67	VPH_PWR_EXT_LCD_BIAS	3.68 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.68 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.68 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.67 V	1.00 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.01 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.68 V	0.22 mA
50	VPH_SPKR	3.68 V	0.04 mA
0	BATTERY (Measured)	3.70 V	650.76 mA
	Battery Adjusted Value	3.70 V	376.22 mA

Table 4-29 3D UI 30 fps (Graphic, power lift) (QGC23A)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	0.00 mA
2	S2_Output(CX)	0.94 V	161.35 mA
3	S5_6_Output(APPS)	1.07 V	52.76 mA
4		1.07 V	0.01 mA
62	S3_Output(VPM_S3_1P288)	1.27 V	102.92 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.01 mA
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA
9	L2_LPDDR(SMPS3A)	1.20 V	47.35 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.02 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	8.94 mA
81	L2_PX1(SMPS3A)	1.20 V	18.10 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.06 V	21.73 mA
6	L3_CDC_EBI0(SMPS3A)	1.05 V	6.48 mA
10	L3_PLL(SMPS3A)	1.05 V	0.63 mA
28	V_S3_ELDO4(SMPS3A)	1.27 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	-0.08 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	33.82 mA
102	L4_WTR1(SMPS4A)	0.09 V	0.00 mA
104	L4_WTR0(SMPS4A)	0.09 V	0.01 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA
94	L5_PX3(SMPS4A)	1.80 V	1.88 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	3.41 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.12 mA
124	VDD_MSM_IO(SMPS4A)	1.79 V	1.41 mA
72	L6_CAM0_D_DO(SMPS4A)	1.80 V	0.02 mA
73	L6_LCD_IO(SMPS4A)	1.79 V	20.10 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.40 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	1.79 V	2.33 mA
76	L6_SENSOR(SMPS4A)	1.80 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	1.80 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	1.80 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.00 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.06 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	1.05 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.00 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	0.00 mA
144	CDC_VDD_CP	2.06 V	0.03 mA
105	L13_USB_VDDA	0.00 V	0.00 mA
118	L10_SENSOR	2.85 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	2.09 mA
84	L18_QFE_RF(RF 360)	0.00 V	0.00 mA
91	V_L14_UICC1_IN(MEMORY)	1.79 V	0.05 mA
95	L14_PX5_DUAL	1.79 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.12 V	0.02 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	2.85 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	2.85 V	1.20 mA
27	L17_CAM1_ACT[CAMERA]	2.85 V	0.56 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.69 V	0.00 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.69 V	0.02 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.69 V	0.01 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.69 V	0.00 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.69 V	0.00 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.69 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.69 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.69 V	83.92 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.08 mA
54	VIN_TORCH(VDOM_PMi8937)	3.69 V	0.05 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.65 V	14.64 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.64 V	17.61 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.69 V	0.03 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.69 V	0.01 mA
67	VPH_PWR_EXT_LCD_BIAS	3.69 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.69 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.69 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.69 V	0.65 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.00 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.69 V	0.11 mA
50	VPH_SPKR	3.69 V	0.02 mA
0	BATTERY (Measured)	3.70 V	248.57 mA
	Battery Adjusted Value	3.70 V	115.66 mA

Table 4-30 T-Rex, 15 fps

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	0.00 mA
2	S2_Output(CX)	1.17 V	532.20 mA
3	S5_6_Output(APPS)	1.07 V	44.76 mA
4		1.07 V	0.11 mA
62	S3_Output(VPM_S3_1P288)	1.40 V	283.18 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.01 mA
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA
9	L2_LPDDR(SMPS3A)	1.22 V	114.59 mA
21	L2_USB_DVDD(SMPS3A)	1.22 V	0.07 mA
79	L2_CSI_MIPI(SMPS3A)	1.23 V	0.03 mA
80	L2_DSI_MIPI(SMPS3A)	1.22 V	8.62 mA
81	L2_PX1(SMPS3A)	1.22 V	30.60 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.30 V	80.01 mA
6	L3_CDC_EBI0(SMPS3A)	1.28 V	48.18 mA
10	L3_PLL(SMPS3A)	1.30 V	0.67 mA
28	V_S3_ELDO4(SMPS3A)	1.40 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	-0.07 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	53.36 mA
102	L4_WTR1(SMPS4A)	0.09 V	0.00 mA
104	L4_WTR0(SMPS4A)	0.09 V	0.01 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA
94	L5_PX3(SMPS4A)	1.80 V	9.85 mA
98	L5_DDR_VDD1(SMPS4A)	1.79 V	6.84 mA

Qualcomm 2015-01-29 23:13:55 PST Confidential and Proprietary – Qualcomm Technologies, Inc. www.wingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.11 mA
124	VDD_MSM_IO(SMPS4A)	1.79 V	1.41 mA
72	L6_CAM0_D_DO(SMPS4A)	1.80 V	0.02 mA
73	L6_LCD_IO(SMPS4A)	1.79 V	25.26 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.40 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	1.80 V	2.34 mA
76	L6_SENSOR(SMPS4A)	1.80 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	1.80 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	1.80 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.00 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.06 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.79 V	3.40 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.00 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	0.01 mA
144	CDC_VDD_CP	2.06 V	0.01 mA
105	L13_USB_VDDA	0.00 V	0.00 mA
118	L10_SENSOR	2.85 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	2.09 mA
84	L18_QFE_RF(RF 360)	0.00 V	0.01 mA
91	V_L14_UICC1_IN(MEMORY)	1.79 V	0.05 mA
95	L14_PX5_DUAL	1.79 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.11 V	0.02 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	2.85 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	2.85 V	1.21 mA
27	L17_CAM1_ACT[CAMERA]	2.85 V	0.56 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.68 V	0.01 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.68 V	0.00 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.68 V	0.06 mA

Qualcomm 2019-01-23 23:13:55 GMT zk_sw@wingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.68 V	0.00 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.68 V	0.03 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.68 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.68 V	0.01 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.68 V	84.15 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.12 mA
54	VIN_TORCH(VDOM_PMi8937)	3.68 V	0.06 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.64 V	13.44 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.63 V	16.38 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.68 V	0.02 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.68 V	0.01 mA
67	VPH_PWR_EXT_LCD_BIAS	3.68 V	0.01 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.68 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.68 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.68 V	0.98 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.01 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.68 V	0.11 mA
50	VPH_SPKR	3.68 V	0.02 mA
0	BATTERY (Measured)	3.70 V	484.32 mA
	Battery Adjusted Value	3.70 V	349.97 mA

Table 4-31 Static Image (48 fps) (LCD04A)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	0.00 mA
2	S2_Output(CX)	0.93 V	62.41 mA
3	S5_6_Output(APPS)	0.01 V	0.42 mA
4		0.01 V	0.11 mA
62	S3_Output(VPM_S3_1P288)	1.27 V	30.92 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.00 mA
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA
9	L2_LPDDR(SMPS3A)	1.20 V	12.63 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.02 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	7.19 mA
81	L2_PX1(SMPS3A)	1.20 V	2.85 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.05 V	6.43 mA
6	L3_CDC_EBI0(SMPS3A)	1.05 V	1.68 mA
10	L3_PLL(SMPS3A)	1.05 V	0.00 mA
28	V_S3_ELDO4(SMPS3A)	1.27 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	-0.05 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	29.62 mA
102	L4_WTR1(SMPS4A)	0.10 V	0.00 mA
104	L4_WTR0(SMPS4A)	0.10 V	0.01 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.02 mA
94	L5_PX3(SMPS4A)	1.80 V	1.86 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	1.56 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.06 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	1.47 mA
72	L6_CAM0_D_DO(SMPS4A)	1.80 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	1.79 V	17.99 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.42 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	1.80 V	2.43 mA
76	L6_SENSOR(SMPS4A)	1.80 V	0.03 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	1.80 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	1.80 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.00 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.07 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	0.73 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.00 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	0.00 mA
144	CDC_VDD_CP	2.06 V	0.01 mA
105	L13_USB_VDDA	0.00 V	0.00 mA
118	L10_SENSOR	2.86 V	0.00 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
24	V_L10_TS_2P85(TOUCHSCRN)	2.86 V	2.06 mA
84	L18_QFE_RF(RF 360)	0.00 V	0.00 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.04 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.12 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	2.86 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	2.86 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	2.86 V	0.00 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.70 V	0.02 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.70 V	0.02 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.70 V	0.06 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.70 V	0.01 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.70 V	0.10 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.70 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.70 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.69 V	84.25 mA
53	VIN_FLASH(VDOM_PMi8937)	3.49 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.70 V	0.00 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.66 V	12.78 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.65 V	16.60 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.70 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.70 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.70 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.70 V	0.01 mA
111	VPH_PWR_ELDO3(VPH)	3.70 V	0.00 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.70 V	0.51 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.70 V	0.12 mA
50	VPH_SPKR	3.70 V	0.00 mA
0	BATTERY (Measured)	3.70 V	165.80 mA
	Battery Adjusted Value	3.70 V	39.17 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

Table 4-32 Browser over WiFi (WB1A)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	0.04 mA
2	S2_Output(CX)	0.96 V	79.64 mA
3	S5_6_Output(APPS)	0.12 V	13.54 mA
4		0.12 V	3.88 mA
62	S3_Output(VPM_S3_1P288)	1.32 V	48.69 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA
70	L19_WLAN(SMPS3A)	1.27 V	0.69 mA
83	L19_WGR (VDD_RF)(SMPS3A)	1.28 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	1.28 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	1.27 V	9.63 mA
112	L19_LBBRX(SMPS3A)	1.28 V	0.00 mA
9	L2_LPDDR(SMPS3A)	1.20 V	15.72 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.03 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	5.18 mA
81	L2_PX1(SMPS3A)	1.20 V	6.72 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.07 V	7.66 mA
6	L3_CDC_EBI0(SMPS3A)	1.07 V	3.09 mA
10	L3_PLL(SMPS3A)	1.07 V	0.03 mA
28	V_S3_ELDO4(SMPS3A)	1.32 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	0.00 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	30.26 mA
102	L4_WTR1(SMPS4A)	0.09 V	0.00 mA
104	L4_WTR0(SMPS4A)	0.09 V	0.01 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA
94	L5_PX3(SMPS4A)	1.80 V	2.02 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	1.95 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.18 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.27 mA
124	VDD_MSM_IO(SMPS4A)	1.79 V	1.41 mA
72	L6_CAM0_D_DO(SMPS4A)	1.80 V	0.02 mA
73	L6_LCD_IO(SMPS4A)	1.79 V	16.51 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.40 mA

Qualcomm 2019-01-29 23:13:55 PST zk_jnewingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
75	L6_DSI_PLL(MIPI)(SMPS4A)	1.80 V	2.33 mA
76	L6_SENSOR(SMPS4A)	1.80 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	1.80 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	1.80 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.00 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.06 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	1.05 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.95 mA
100	V_S4_ELDO6	2.06 V	0.00 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	0.00 mA
144	CDC_VDD_CP	2.06 V	0.01 mA
105	L13_USB_VDDA	0.00 V	0.00 mA
118	L10_SENSOR	2.85 V	0.01 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	2.09 mA
84	L18_QFE_RF(RF 360)	0.13 V	0.01 mA
91	V_L14_UICC1_IN(MEMORY)	1.79 V	0.05 mA
95	L14_PX5_DUAL	1.79 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	3.31 V	0.04 mA
16	L8_EMMC[MEMORY]	2.29 V	0.07 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	2.85 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	2.85 V	1.22 mA
27	L17_CAM1_ACT[CAMERA]	2.85 V	0.57 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.69 V	0.04 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.69 V	0.06 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.69 V	1.28 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.69 V	0.03 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.69 V	0.17 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.69 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.69 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.69 V	83.88 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.14 mA
54	VIN_TORCH(VDOM_PMi8937)	3.69 V	0.06 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
131	VPH_PWR_DISP(VDOM_PMi8937)	3.65 V	12.91 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.64 V	16.12 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.69 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.69 V	0.01 mA
67	VPH_PWR_EXT_LCD_BIAS	3.69 V	0.01 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.69 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.69 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.69 V	0.57 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.01 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.69 V	0.11 mA
50	VPH_SPKR	3.69 V	0.02 mA
0	BATTERY (Measured)	3.70 V	187.92 mA
	Battery Adjusted Value	3.70 V	60.14 mA

Table 4-33 Video Streaming over WiFi (VS6A)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	0.03 mA
2	S2_Output(CX)	0.98 V	129.70 mA
3	S5_6_Output(APPS)	0.93 V	83.29 mA
4		0.93 V	0.27 mA
62	S3_Output(VPM_S3_1P288)	1.34 V	110.39 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA
70	L19_WLAN(SMPS3A)	1.29 V	1.52 mA
83	L19_WGR (VDD_RF)(SMPS3A)	1.29 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	1.29 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	1.29 V	27.10 mA
112	L19_LBBRX(SMPS3A)	1.29 V	0.00 mA
9	L2_LPDDR(SMPS3A)	1.20 V	36.81 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.02 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	9.25 mA
81	L2_PX1(SMPS3A)	1.20 V	14.69 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.07 V	14.93 mA
6	L3_CDC_EBI0(SMPS3A)	1.07 V	5.59 mA
10	L3_PLL(SMPS3A)	1.07 V	1.08 mA

Qualcomm 2019-01-21 13:13:53 PST zk_sw@wingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
28	V_S3_ELDO4(SMPS3A)	1.34 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	-0.05 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	48.86 mA
102	L4_WTR1(SMPS4A)	0.09 V	0.00 mA
104	L4_WTR0(SMPS4A)	0.09 V	0.01 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA
94	L5_PX3(SMPS4A)	1.80 V	3.67 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	3.67 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.52 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.17 mA
124	VDD_MSM_IO(SMPS4A)	1.79 V	1.41 mA
72	L6_CAM0_D_DO(SMPS4A)	1.80 V	0.02 mA
73	L6_LCD_IO(SMPS4A)	1.79 V	21.78 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.40 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	1.79 V	2.34 mA
76	L6_SENSOR(SMPS4A)	1.80 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	1.80 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	1.80 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.00 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.06 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	1.63 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.79 V	2.82 mA
100	V_S4_ELDO6	2.06 V	0.00 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	2.02 mA
144	CDC_VDD_CP	2.06 V	2.34 mA
105	L13_USB_VDDA	3.08 V	0.01 mA
118	L10_SENSOR	2.85 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	2.09 mA
84	L18_QFE_RF(RF 360)	0.14 V	0.00 mA
91	V_L14_UICC1_IN(MEMORY)	1.79 V	0.03 mA
95	L14_PX5_DUAL	1.79 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	1.94 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	3.31 V	0.03 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
16	L8_EMMC[MEMORY]	2.07 V	0.03 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	2.85 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	2.85 V	1.22 mA
27	L17_CAM1_ACT[CAMERA]	2.85 V	0.56 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.69 V	0.02 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.69 V	0.04 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.69 V	10.56 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.69 V	0.01 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.69 V	0.06 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.69 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.69 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.69 V	83.85 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.03 mA
54	VIN_TORCH(VDOM_PMi8937)	3.69 V	0.04 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.65 V	13.34 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.64 V	16.57 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.69 V	0.01 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.69 V	0.01 mA
67	VPH_PWR_EXT_LCD_BIAS	3.69 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.69 V	0.01 mA
111	VPH_PWR_ELDO3(VPH)	3.69 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.69 V	1.08 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.69 V	0.11 mA
50	VPH_SPKR	3.69 V	0.03 mA
0	BATTERY (Measured)	3.70 V	273.90 mA
	Battery Adjusted Value	3.70 V	142.11 mA

Table 4-34 Listen − 100% silence (AU34A)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	0.00 mA
2	S2_Output(CX)	0.93 V	18.28 mA
3	S5_6_Output(APPS)	0.00 V	-0.08 mA
4		0.00 V	0.06 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
62	S3_Output(VPM_S3_1P288)	1.27 V	5.01 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.00 mA
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA
9	L2_LPDDR(SMPS3A)	1.20 V	1.18 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.02 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.02 mA
81	L2_PX1(SMPS3A)	1.20 V	0.10 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.05 V	2.93 mA
6	L3_CDC_EBI0(SMPS3A)	1.05 V	0.45 mA
10	L3_PLL(SMPS3A)	1.05 V	0.43 mA
28	V_S3_ELDO4(SMPS3A)	1.27 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	-0.05 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	7.70 mA
102	L4_WTR1(SMPS4A)	0.10 V	0.00 mA
104	L4_WTR0(SMPS4A)	0.10 V	0.01 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA
94	L5_PX3(SMPS4A)	1.80 V	2.93 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	0.74 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.06 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.26 mA
72	L6_CAM0_D_DO(SMPS4A)	0.10 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	0.10 V	0.00 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.05 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	0.10 V	0.00 mA
76	L6_SENSOR(SMPS4A)	0.10 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	0.10 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	0.10 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.00 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
96	L7_TXDAC(SMPS4A)	1.80 V	0.07 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	0.05 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.01 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	0.00 mA
144	CDC_VDD_CP	2.06 V	0.00 mA
105	L13_USB_VDDA	3.08 V	0.00 mA
118	L10_SENSOR	2.85 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	0.03 mA
84	L18_QFE_RF(RF 360)	0.00 V	0.00 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.04 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.12 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.70 V	0.01 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.70 V	0.00 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.70 V	0.01 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.70 V	0.00 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.70 V	0.05 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.70 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.70 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.70 V	0.01 mA
53	VIN_FLASH(VDOM_PMi8937)	3.58 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.70 V	0.02 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.70 V	0.00 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.70 V	0.00 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.70 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.70 V	0.00 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
67	VPH_PWR_EXT_LCD_BIAS	3.70 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.70 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.70 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.70 V	0.39 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.70 V	0.10 mA
50	VPH_SPKR	3.70 V	0.01 mA
0	BATTERY (Measured)	3.70 V	13.98 mA

Table 4-35 Listen - 100% speech (AU35A)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	-0.07 mA
2	S2_Output(CX)	0.93 V	22.82 mA
3	S5_6_Output(APPS)	0.00 V	-0.15 mA
4		0.00 V	0.00 mA
62	S3_Output(VPM_S3_1P288)	1.27 V	5.24 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.00 mA
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA
9	L2_LPDDR(SMPS3A)	1.20 V	1.17 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.02 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.02 mA
81	L2_PX1(SMPS3A)	1.20 V	0.11 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.05 V	3.05 mA
6	L3_CDC_EBI0(SMPS3A)	1.05 V	0.45 mA
10	L3_PLL(SMPS3A)	1.05 V	0.43 mA
28	V_S3_ELDO4(SMPS3A)	1.27 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	-0.06 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	7.35 mA
102	L4_WTR1(SMPS4A)	0.10 V	0.00 mA
104	L4_WTR0(SMPS4A)	0.10 V	0.01 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA

Qualcomm 2021-01-29 23:13:55 PST

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA
94	L5_PX3(SMPS4A)	1.80 V	2.93 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	0.76 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.06 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	0.26 mA
72	L6_CAM0_D_DO(SMPS4A)	0.10 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	0.10 V	0.00 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.05 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	0.10 V	0.00 mA
76	L6_SENSOR(SMPS4A)	0.10 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	0.10 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	0.10 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.00 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.07 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	0.05 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.00 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	0.00 mA
144	CDC_VDD_CP	2.06 V	0.00 mA
105	L13_USB_VDDA	3.08 V	0.00 mA
118	L10_SENSOR	2.85 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	0.03 mA
84	L18_QFE_RF(RF 360)	0.00 V	0.00 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.04 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.12 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	0.00 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	0.00 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	0.00 V	0.00 mA

Qualcomm 2015-[illegible] 23:13:55 PST zk_sw@xiaomi.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.70 V	0.00 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.70 V	0.00 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.70 V	0.00 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.70 V	0.00 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.70 V	0.00 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.70 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.70 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.70 V	0.00 mA
53	VIN_FLASH(VDOM_PMi8937)	3.58 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.70 V	0.03 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.70 V	0.00 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.70 V	0.00 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.70 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.70 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.70 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.70 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.70 V	0.00 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.70 V	0.40 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.70 V	0.10 mA
50	VPH_SPKR	3.70 V	0.00 mA
0	BATTERY (Measured)	3.70 V	15.52 mA

Table 4-36 Sensors - Accelerometer active 15Hz (SNS4A)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	-0.07 mA
2	S2_Output(CX)	0.92 V	62.35 mA
3	S5_6_Output(APPS)	0.10 V	5.61 mA
4		0.10 V	0.11 mA
62	S3_Output(VPM_S3_1P288)	1.27 V	32.81 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.00 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA
9	L2_LPDDR(SMPS3A)	1.20 V	13.67 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.03 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	7.19 mA
81	L2_PX1(SMPS3A)	1.20 V	3.54 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.05 V	6.44 mA
6	L3_CDC_EBI0(SMPS3A)	1.05 V	1.88 mA
10	L3_PLL(SMPS3A)	1.05 V	0.00 mA
28	V_S3_ELDO4(SMPS3A)	1.27 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	-0.08 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	29.81 mA
102	L4_WTR1(SMPS4A)	0.10 V	0.00 mA
104	L4_WTR0(SMPS4A)	0.10 V	0.01 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA
94	L5_PX3(SMPS4A)	1.80 V	1.87 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	1.69 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.06 mA
124	VDD_MSM_IO(SMPS4A)	1.80 V	1.47 mA
72	L6_CAM0_D_DO(SMPS4A)	1.80 V	0.00 mA
73	L6_LCD_IO(SMPS4A)	1.79 V	17.99 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.41 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	1.80 V	2.43 mA
76	L6_SENSOR(SMPS4A)	1.80 V	0.14 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	1.80 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	1.80 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.00 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.07 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	0.77 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.00 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	0.00 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
144	CDC_VDD_CP	2.06 V	0.01 mA
105	L13_USB_VDDA	0.00 V	0.00 mA
118	L10_SENSOR	2.86 V	0.01 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.86 V	2.05 mA
84	L18_QFE_RF(RF 360)	0.00 V	0.00 mA
91	V_L14_UICC1_IN(MEMORY)	1.80 V	0.04 mA
95	L14_PX5_DUAL	1.80 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.12 V	0.00 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	2.86 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	2.86 V	0.00 mA
27	L17_CAM1_ACT[CAMERA]	2.86 V	0.00 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.70 V	0.00 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.70 V	0.00 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.70 V	0.04 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.70 V	0.00 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.70 V	0.00 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.70 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.70 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.69 V	84.40 mA
53	VIN_FLASH(VDOM_PMi8937)	3.49 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.70 V	0.03 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.66 V	12.82 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.65 V	16.62 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.70 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.70 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.70 V	0.01 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.70 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.70 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.70 V	0.51 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.01 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.69 V	0.94 mA
50	VPH_SPKR	3.70 V	0.02 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
0	BATTERY (Measured)	3.70 V	168.59 mA
	Battery Adjusted Value	3.70 V	41.50 mA

Table 4-37 Command mode − Static Image (LCD04AC)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	0.03 mA
2	S2_Output(CX)	0.53 V	3.04 mA
3	S5_6_Output(APPS)	0.03 V	1.05 mA
4		0.03 V	0.16 mA
62	S3_Output(VPM_S3_1P288)	1.28 V	1.76 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.00 mA
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA
9	L2_LPDDR(SMPS3A)	1.20 V	1.11 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.05 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.02 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.09 mA
81	L2_PX1(SMPS3A)	1.20 V	0.13 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	0.62 V	0.64 mA
6	L3_CDC_EBI0(SMPS3A)	0.62 V	0.08 mA
10	L3_PLL(SMPS3A)	0.62 V	0.00 mA
28	V_S3_ELDO4(SMPS3A)	1.28 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	0.00 mA
55	S4_Output(VPM_S4_2P05)	1.91 V	18.53 mA
102	L4_WTR1(SMPS4A)	0.29 V	0.00 mA
104	L4_WTR0(SMPS4A)	0.29 V	0.02 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA
94	L5_PX3(SMPS4A)	1.80 V	0.39 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	0.74 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA

Qualcomm
2021-03-29 23:13:55 PST
www.ewewingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
123	L5_EMMC(SMPS4A)	1.80 V	0.13 mA
124	VDD_MSM_IO(SMPS4A)	1.79 V	1.41 mA
72	L6_CAM0_D_DO(SMPS4A)	1.80 V	0.01 mA
73	L6_LCD_IO(SMPS4A)	1.79 V	14.94 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.39 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	1.80 V	0.00 mA
76	L6_SENSOR(SMPS4A)	1.80 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	1.80 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	1.80 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.02 V	0.00 mA
96	L7_TXDAC(SMPS4A)	1.02 V	0.00 mA
106	USB_VDDA(SMPS4A)	1.02 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.02 V	0.03 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.02 V	0.00 mA
100	V_S4_ELDO6	1.91 V	0.01 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	1.91 V	0.00 mA
144	CDC_VDD_CP	1.91 V	0.01 mA
105	L13_USB_VDDA	0.00 V	0.00 mA
118	L10_SENSOR	2.85 V	0.01 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	2.10 mA
84	L18_QFE_RF(RF 360)	0.00 V	0.00 mA
91	V_L14_UICC1_IN(MEMORY)	1.79 V	0.04 mA
95	L14_PX5_DUAL	1.79 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.10 V	0.01 mA
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	2.85 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	2.85 V	1.22 mA
27	L17_CAM1_ACT[CAMERA]	2.85 V	0.57 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.69 V	0.04 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.69 V	0.05 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.69 V	0.07 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.69 V	0.03 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.69 V	0.19 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.69 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.69 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.69 V	83.70 mA
53	VIN_FLASH(VDOM_PMi8937)	3.49 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.69 V	0.04 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.65 V	13.39 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.64 V	16.55 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.69 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.69 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.69 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.69 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.69 V	0.00 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.69 V	0.21 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.69 V	0.11 mA
50	VPH_SPKR	3.69 V	0.00 mA
0	BATTERY (Measured)	3.70 V	129.98 mA
	Battery Adjusted Value	3.70 V	3.65 mA

Table 4-38 Command mode − H.264 720p decode, 30 fps (QTC77AC)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	0.00 mA
2	S2_Output(CX)	0.94 V	101.13 mA
3	S5_6_Output(APPS)	1.00 V	73.57 mA
4		1.00 V	0.15 mA
62	S3_Output(VPM_S3_1P288)	1.27 V	65.47 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.00 mA
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA
9	L2_LPDDR(SMPS3A)	1.20 V	31.50 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.02 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	4.45 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
81	L2_PX1(SMPS3A)	1.20 V	13.58 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.05 V	10.15 mA
6	L3_CDC_EBI0(SMPS3A)	1.05 V	4.58 mA
10	L3_PLL(SMPS3A)	1.05 V	1.07 mA
28	V_S3_ELDO4(SMPS3A)	1.27 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	-0.07 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	52.78 mA
102	L4_WTR1(SMPS4A)	0.09 V	0.00 mA
104	L4_WTR0(SMPS4A)	0.09 V	0.01 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA
94	L5_PX3(SMPS4A)	1.80 V	3.34 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	3.19 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	1.69 mA
124	VDD_MSM_IO(SMPS4A)	1.79 V	1.41 mA
72	L6_CAM0_D_DO(SMPS4A)	1.80 V	0.02 mA
73	L6_LCD_IO(SMPS4A)	1.79 V	29.09 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.40 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	1.80 V	1.42 mA
76	L6_SENSOR(SMPS4A)	1.80 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	1.80 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	1.80 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.00 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.06 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	1.19 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.00 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	2.13 mA
144	CDC_VDD_CP	2.06 V	2.40 mA
105	L13_USB_VDDA	3.08 V	0.01 mA
118	L10_SENSOR	2.85 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	2.09 mA
84	L18_QFE_RF(RF 360)	0.00 V	0.00 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
91	V_L14_UICC1_IN(MEMORY)	1.79 V	0.04 mA
95	L14_PX5_DUAL	1.79 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.24 V	0.01 mA
16	L8_EMMC[MEMORY]	2.90 V	0.33 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	2.85 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	2.85 V	1.21 mA
27	L17_CAM1_ACT[CAMERA]	2.85 V	0.56 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.69 V	0.02 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.69 V	0.00 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.69 V	0.00 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.69 V	0.00 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.69 V	0.08 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.69 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.69 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.69 V	83.99 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.00 mA
54	VIN_TORCH(VDOM_PMi8937)	3.69 V	0.01 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.65 V	13.36 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.64 V	16.61 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.69 V	0.03 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.69 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.69 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.69 V	0.01 mA
111	VPH_PWR_ELDO3(VPH)	3.69 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.69 V	1.01 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.01 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.69 V	0.11 mA
50	VPH_SPKR	3.69 V	0.00 mA
0	BATTERY (Measured)	3.70 V	232.16 mA
	Battery Adjusted Value	3.70 V	94.80 mA

QUALCOMM CONFIDENTIAL AND PROPRIETARY

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

Table 4-39 Command mode − H.264 1080p decode, 30 fps (QTC88AC)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	0.00 mA
2	S2_Output(CX)	0.94 V	113.67 mA
3	S5_6_Output(APPS)	0.98 V	70.52 mA
4		0.98 V	0.13 mA
62	S3_Output(VPM_S3_1P288)	1.27 V	94.15 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.00 mA
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA
9	L2_LPDDR(SMPS3A)	1.20 V	48.44 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.02 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	4.44 mA
81	L2_PX1(SMPS3A)	1.20 V	19.44 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.05 V	14.45 mA
6	L3_CDC_EBI0(SMPS3A)	1.05 V	6.46 mA
10	L3_PLL(SMPS3A)	1.05 V	1.07 mA
28	V_S3_ELDO4(SMPS3A)	1.27 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	-0.07 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	55.91 mA
102	L4_WTR1(SMPS4A)	0.09 V	0.00 mA
104	L4_WTR0(SMPS4A)	0.09 V	0.01 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA
94	L5_PX3(SMPS4A)	1.80 V	3.33 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	4.39 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	2.84 mA
124	VDD_MSM_IO(SMPS4A)	1.79 V	1.41 mA
72	L6_CAM0_D_DO(SMPS4A)	1.80 V	0.01 mA
73	L6_LCD_IO(SMPS4A)	1.78 V	30.22 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.40 mA

Qualcomm
2019-01-29 23:13:55 PST
zk_jnewingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
75	L6_DSI_PLL(MIPI)(SMPS4A)	1.80 V	1.57 mA
76	L6_SENSOR(SMPS4A)	1.80 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	1.80 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	1.80 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.00 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.06 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	1.18 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.00 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	2.06 mA
144	CDC_VDD_CP	2.06 V	2.45 mA
105	L13_USB_VDDA	3.08 V	0.01 mA
118	L10_SENSOR	2.85 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	2.10 mA
84	L18_QFE_RF(RF 360)	0.00 V	0.00 mA
91	V_L14_UICC1_IN(MEMORY)	1.79 V	0.04 mA
95	L14_PX5_DUAL	1.79 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.24 V	0.01 mA
16	L8_EMMC[MEMORY]	2.90 V	0.58 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	2.85 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	2.85 V	1.21 mA
27	L17_CAM1_ACT[CAMERA]	2.85 V	0.56 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.69 V	0.02 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.69 V	0.04 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.69 V	0.03 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.69 V	0.00 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.69 V	0.07 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.69 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.69 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.69 V	83.99 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.03 mA
54	VIN_TORCH(VDOM_PMi8937)	3.69 V	0.05 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
131	VPH_PWR_DISP(VDOM_PMi8937)	3.65 V	13.42 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.64 V	16.66 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.69 V	0.02 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.69 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.69 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.69 V	0.01 mA
111	VPH_PWR_ELDO3(VPH)	3.69 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.69 V	1.05 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.69 V	0.11 mA
50	VPH_SPKR	3.69 V	0.00 mA
0	BATTERY (Measured)	3.70 V	248.74 mA
	Battery Adjusted Value	3.70 V	109.14 mA

Table 4-40 Command mode − 3D UI 30 fps (Graphic, power lift) (QGC23AC)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	0.03 mA
2	S2_Output(CX)	0.94 V	146.18 mA
3	S5_6_Output(APPS)	1.07 V	92.88 mA
4		1.07 V	0.20 mA
62	S3_Output(VPM_S3_1P288)	1.27 V	90.99 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.01 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA
70	L19_WLAN(SMPS3A)	0.00 V	0.00 mA
83	L19_WGR (VDD_RF)(SMPS3A)	0.00 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	0.00 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	0.00 V	0.00 mA
112	L19_LBBRX(SMPS3A)	0.00 V	0.00 mA
9	L2_LPDDR(SMPS3A)	1.20 V	42.11 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.02 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	4.10 mA
81	L2_PX1(SMPS3A)	1.20 V	17.51 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.06 V	20.58 mA
6	L3_CDC_EBI0(SMPS3A)	1.05 V	6.23 mA
10	L3_PLL(SMPS3A)	1.06 V	0.63 mA

Qualcomm 2019-01-21 13:13:37 PST zk_sw@wingtech.com

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
28	V_S3_ELDO4(SMPS3A)	1.27 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	0.00 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	38.63 mA
102	L4_WTR1(SMPS4A)	0.09 V	0.00 mA
104	L4_WTR0(SMPS4A)	0.09 V	0.02 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA
94	L5_PX3(SMPS4A)	1.80 V	1.89 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	3.28 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.00 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.13 mA
124	VDD_MSM_IO(SMPS4A)	1.79 V	1.41 mA
72	L6_CAM0_D_DO(SMPS4A)	1.80 V	0.01 mA
73	L6_LCD_IO(SMPS4A)	1.79 V	25.83 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.40 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	1.80 V	1.40 mA
76	L6_SENSOR(SMPS4A)	1.80 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	1.80 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	1.80 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.00 mA
96	L7_TXDAC(SMPS4A)	1.80 V	0.06 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	1.35 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.00 mA
100	V_S4_ELDO6	2.06 V	0.02 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	0.00 mA
144	CDC_VDD_CP	2.06 V	0.00 mA
105	L13_USB_VDDA	0.00 V	0.00 mA
118	L10_SENSOR	2.85 V	0.01 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	2.11 mA
84	L18_QFE_RF(RF 360)	0.00 V	0.00 mA
91	V_L14_UICC1_IN(MEMORY)	1.79 V	0.04 mA
95	L14_PX5_DUAL	1.79 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	0.11 V	0.01 mA

Qualcomm

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
16	L8_EMMC[MEMORY]	0.00 V	0.00 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	2.85 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	2.85 V	1.22 mA
27	L17_CAM1_ACT[CAMERA]	2.85 V	0.57 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.69 V	0.04 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.69 V	0.04 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.69 V	0.08 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.69 V	0.03 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.69 V	0.18 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.69 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.69 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.69 V	83.91 mA
53	VIN_FLASH(VDOM_PMi8937)	3.48 V	0.01 mA
54	VIN_TORCH(VDOM_PMi8937)	3.69 V	0.06 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.65 V	14.60 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.64 V	17.58 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.69 V	0.00 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.69 V	0.00 mA
67	VPH_PWR_EXT_LCD_BIAS	3.69 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.69 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.69 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.69 V	0.64 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.00 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.69 V	0.11 mA
50	VPH_SPKR	3.69 V	0.00 mA
0	BATTERY (Measured)	3.70 V	255.75 mA
	Battery Adjusted Value	3.70 V	119.07 mA

Table 4-41 Command mode − Browser over Wi-Fi (WB1AC)

RCM channel	Regulator	Voltage (V)	Current I (mA)
1	S1_Output(MSS)	0.00 V	0.03 mA
2	S2_Output(CX)	0.95 V	41.81 mA
3	S5_6_Output(APPS)	0.12 V	14.20 mA
4		0.12 V	3.86 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
62	S3_Output(VPM_S3_1P288)	1.31 V	19.53 mA
122	L1_WTR1(SMPS3A)	0.00 V	0.00 mA
121	L1_WTR0(SMPS3A)	0.00 V	0.00 mA
70	L19_WLAN(SMPS3A)	1.27 V	0.69 mA
83	L19_WGR (VDD_RF)(SMPS3A)	1.27 V	0.00 mA
85	L19_GPS_AVDD(SMPS3A)	1.27 V	0.00 mA
86	L19_WCN_VDD(SMPS3A)	1.27 V	9.20 mA
112	L19_LBBRX(SMPS3A)	1.27 V	0.00 mA
9	L2_LPDDR(SMPS3A)	1.20 V	3.56 mA
21	L2_USB_DVDD(SMPS3A)	1.20 V	0.06 mA
79	L2_CSI_MIPI(SMPS3A)	1.20 V	0.02 mA
80	L2_DSI_MIPI(SMPS3A)	1.20 V	0.17 mA
81	L2_PX1(SMPS3A)	1.20 V	1.39 mA
29	L23_CAM1_D(SMPS3A)	0.00 V	0.00 mA
5	L3_MX(SMPS3A)	1.06 V	3.68 mA
6	L3_CDC_EBI0(SMPS3A)	1.06 V	1.20 mA
10	L3_PLL(SMPS3A)	1.06 V	0.02 mA
28	V_S3_ELDO4(SMPS3A)	1.31 V	0.00 mA
26	ELDO4_CAM0_D(SMPS3A)	0.00 V	0.00 mA
55	S4_Output(VPM_S4_2P05)	2.06 V	23.24 mA
102	L4_WTR1(SMPS4A)	0.09 V	0.00 mA
104	L4_WTR0(SMPS4A)	0.09 V	0.01 mA
7	L5_HDS(HEADSET)(SMPS4A)	1.80 V	0.00 mA
82	L5_NFC_VDDPX(SMPS4A)	1.80 V	0.00 mA
93	L5_QFE_RF(SMPS4A)	1.80 V	0.03 mA
94	L5_PX3(SMPS4A)	1.80 V	1.96 mA
98	L5_DDR_VDD1(SMPS4A)	1.80 V	0.95 mA
99	L5_FP(Finger Print Sensor)(SMPS4A)	1.80 V	0.00 mA
120	L5_WCN_IO(SMPS4A)	1.80 V	0.18 mA
123	L5_EMMC(SMPS4A)	1.80 V	0.26 mA
124	VDD_MSM_IO(SMPS4A)	1.79 V	1.41 mA
72	L6_CAM0_D_DO(SMPS4A)	1.80 V	0.01 mA
73	L6_LCD_IO(SMPS4A)	1.79 V	13.21 mA
74	L5_TS_IO(SMPS4A)	1.80 V	0.40 mA
75	L6_DSI_PLL(MIPI)(SMPS4A)	1.80 V	0.03 mA
76	L6_SENSOR(SMPS4A)	1.80 V	0.00 mA
77	L6_QFPROM (BLOW_VDD)(SMPS4A)	1.80 V	0.00 mA
78	L6_CAM1_D0(SMPS4A)	1.80 V	0.00 mA
92	L7_HBBRX(SMPS4A)	1.80 V	0.00 mA

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
96	L7_TXDAC(SMPS4A)	1.80 V	0.06 mA
106	USB_VDDA(SMPS4A)	1.80 V	0.00 mA
108	L7_PLL(MODEM;APPS;BIMC;PRONTO)(SMPS4A)	1.80 V	0.86 mA
109	L7_WCN_XO_1P8(SMPS4A)	1.80 V	0.90 mA
100	V_S4_ELDO6	2.06 V	0.00 mA
35	ELDO6_BC	0.00 V	0.00 mA
143	CDC_VDD_PA	2.06 V	0.00 mA
144	CDC_VDD_CP	2.06 V	0.00 mA
105	L13_USB_VDDA	0.00 V	0.00 mA
118	L10_SENSOR	2.85 V	0.00 mA
24	V_L10_TS_2P85(TOUCHSCRN)	2.85 V	2.10 mA
84	L18_QFE_RF(RF 360)	0.13 V	0.01 mA
91	V_L14_UICC1_IN(MEMORY)	1.79 V	0.05 mA
95	L14_PX5_DUAL	1.79 V	0.00 mA
17	L15_UICC2_IN(MEMORY)	0.00 V	0.00 mA
20	L15_PX6_DUAL	0.00 V	0.00 mA
88	L9_WCN[WCN3680]	3.31 V	0.04 mA
16	L8_EMMC[MEMORY]	2.15 V	0.07 mA
110	L11_SDC2(MEM-SD)	0.00 V	0.00 mA
97	L12_PX2	0.00 V	0.00 mA
23	L17_LCD[DISPLAY]	2.85 V	0.00 mA
25	L17_CAM0_ACT[CAMERA]	2.85 V	1.22 mA
27	L17_CAM1_ACT[CAMERA]	2.85 V	0.57 mA
40	L22_CAM1[CAMERA]	0.00 V	0.00 mA
11	VPH_PWR_RF2(PA)	3.69 V	0.04 mA
14	VPH_PWR_RF1(VDOM_VPH_LOADS)	3.69 V	0.06 mA
12	VPH_PWR_WLAN(VDOM_VPH_LOADS)	3.69 V	1.25 mA
13	VPH_PWR_FP(Finger Print Sensor)(VDOM_VPH_LOADS)	3.69 V	0.03 mA
19	VPH_PWR_BONGO(VDOM_VPH_LOADS)	3.69 V	0.17 mA
36	VPH_PWR_USBC(VDOM_VPH_LOADS)	3.69 V	0.04 mA
90	VPH_PWR_ELDO4(VDOM_VPH_LOADS)	3.69 V	0.00 mA
52	VPH_PWR_WLED(VDOM_PMi8937)	3.69 V	83.92 mA
53	VIN_FLASH(VDOM_PMi8937)	3.49 V	0.09 mA
54	VIN_TORCH(VDOM_PMi8937)	3.69 V	0.04 mA
131	VPH_PWR_DISP(VDOM_PMi8937)	3.65 V	13.19 mA
132	VPH_PWR_DISN(VDOM_PMi8937)	3.64 V	16.51 mA
133	VPH_PWR_HAP(VDOM_PMi8937)	3.69 V	0.01 mA
46	USB_VBUS(charger_from_VDOM_PMI8937)	0.10 V	0.00 mA
51	VPH_CHG_LED	3.69 V	0.01 mA

Qualcomm 2019-01-29 23:13:55 PST

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

RCM channel	Regulator	Voltage (V)	Current I (mA)
67	VPH_PWR_EXT_LCD_BIAS	3.69 V	0.00 mA
101	VPH_PWR_BC_CP(HDMI_CP)(VDOM_AD9394)	3.69 V	0.02 mA
111	VPH_PWR_ELDO3(VPH)	3.69 V	0.01 mA
129	VPH_PWR_PM8937(VDOM_VPH_LOADS)	3.69 V	0.53 mA
130	VBATT(VDOM_VPH_LOADS)	3.70 V	0.01 mA
134	VPH_PVDD_PMI(VDOM_VPH_LOADS)	3.69 V	0.11 mA
50	VPH_SPKR	3.69 V	0.02 mA
0	BATTERY (Measured)	3.70 V	161.13 mA
	Battery Adjusted Value	3.70 V	34.75 mA

4.5 A53 core projected Dhrystone power

NOTE: The following graphic has been updated.

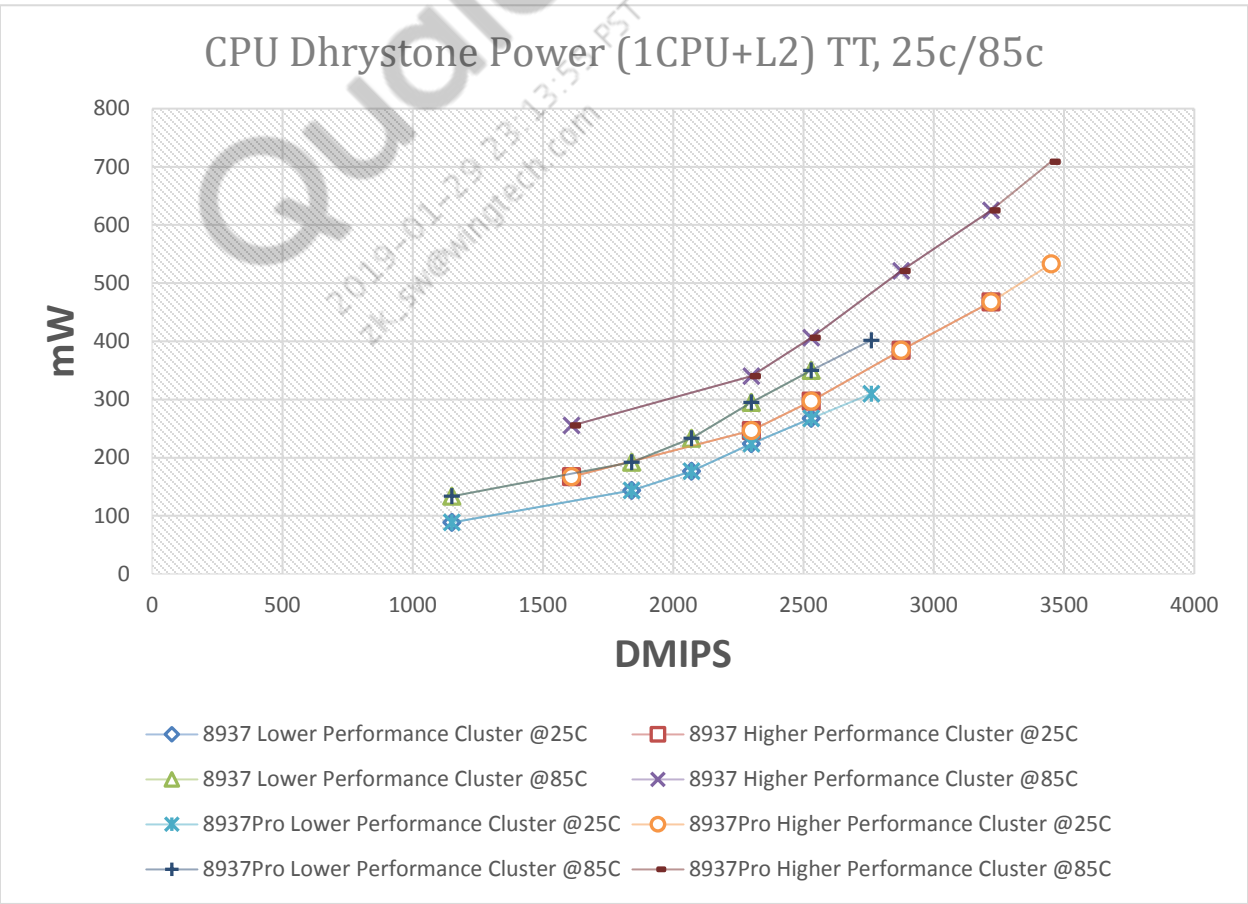


Figure 4-1 A53 core projected Dhrystone power

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION

A References

A.1 Related documents

Title	Number
Qualcomm Technologies, Inc.	
MSM8937 Device Specification (Advance Information)	80-P2468-1
Configuration of Input Pins During Device Sleep	80-VN499-7
30 fps at HD 1080p H.264 20 Mbps AAC+ 96 kbps 44 kHz Stereo (Qtc88) Clip for Multimedia Power Measurement	MH80-VR010-8
MP3 at 44.1 kHz 128 kbps Stereo Clip for Power Measurements	MH80-VR010-5
30 fps at HD 720p H.264 10 Mbps AAC+ 96 kbps 44.1 kHz Stereo (Qtc77) Clip for Multimedia Power Measurement	MH80-VR010-7
Video: 720p 1280x720 30 fps H.264 HP 2.13 Mbps, AAC+ Stereo 44.1 kHz 128 Kbps (YouTube720p)	MH80-VR010-11
EXE, PowerLift 3D Linux Android Graphics Tool Release 5.2.00	HK11-NC876-1
EXE, iBench V.4.6.01 for Linux Android-Enabled Devices	72-N7696-1
MSM8937 Baseband Reference Schematic	80-P2468-41
PM8937 Power Management IC Device Specification	80-P2564-1
Power Consumption Measurement Procedure for MSM (Android-Based)/MDM Devices	80-N6837-1

A.2 Acronyms and terms

Acronym or term	Definition
BT	Bluetooth
DoU	Days of use
DRx	Discontinuous receive
FC	Feature complete
GNSS	Global navigation satellite system
OS	Operating system
RCM	Resistive current measurement
RxD	Receive diversity

MAY CONTAIN U.S. AND INTERNATIONAL EXPORT CONTROLLED INFORMATION