6.6 Power Supply Characteristics (continued)

parameters valid over –40°C ≤ T_J ≤ 150 °C range (unless otherwise noted)

PARAMETER		TEST CONDITIONS	MIN	TYP	MAX	UNIT
I_{BAT}	V_{BAT} sense pin current	470 Ω series resistor with 100nF cap to ground with DIV_ON high, V_{BAT} = 5.5 V to 28 V			220	µA
I_{BATREV}	V_{BAT} sense pin reverse current	470 Ω series resistor with 100nF cap to ground with DIV_ON high V_{BAT} = –24 V	–1			mA
V_{SUP}	Operational supply voltage (ISO/DIS 17987 Param 10)	Device is operational beyond the LIN defined nominal supply voltage range	5.5		36	V
V_{SUP}	Nominal supply voltage (ISO/DIS 17987 Param 10):	Normal(2) and Standby Modes	5.5		28	V
		Sleep Mode	5.5		28	V
UV_{SUPR}	Under voltage V_{SUP} threshold	Ramp Up	4.7		5.3	V
UV_{SUPF}	Under voltage V_{SUP} threshold	Ramp Down	4		4.6	V
U_{VHYS}	Delta hysteresis voltage for V_{SUP} under voltage threshold			0.70		V
V_{nPORR}	V_{SUP} power on reset release rising threshold	Ramp Up	3.5		4.2	V
V_{nPORF}	V_{SUP} power on reset falling threshold	Ramp down	1.9		2.9	V
I_{SUP}	Transceiver and LDO supply current	Transceiver normal mode dominant plus LDO output; where LDO load current is 125 mA			135	mA
$I_{SUPTRXDOM}$	Supply current	Normal Mode: EN = V_{CC} (Pin control mode otherwise SPI enabled), bus dominant: total bus load where R_{LIN} ≥ 500 Ω and C_{LIN} ≤ 10 nF, LDO = no load		2.3	5.2	mA
		Standby Mode: EN = 0 V (Pin control mode otherwise SPI disabled), bus dominant: total bus load where R_{LIN} ≥ 500 Ω and C_{LIN} ≤ 10 nF, LDO = no load		1	1.9	mA
$I_{SUPTRXREC}$	Normal mode recessive supply current	Normal Mode: EN = V_{CC}, Bus recessive: LIN = V_{SUP}, LDO = no load		0.9	1.3	mA
$I_{SUPTRXREC}$	Standby mode recessive supply current	Standby Mode: EN = 0 V (Pin control mode otherwise SPI disabled), LIN = recessive = V_{SUP}, LDO = no load		210	350	µA
$I_{SUPTRXSLP}$	Sleep mode supply current	5.5 V < V_{SUP} ≤ 14 V, LIN = V_{SUP}, WAKE = GND, EN = 0 V (Pin control mode otherwise SPI disabled), TXD and RXD floating, LDO = no load		20	32	µA
		14 V < V_{SUP} ≤ 28 V, LIN = V_{SUP}, WAKE = GND, EN = 0 V (Pin control mode otherwise SPI disabled), TXD and RXD floating, LDO = no load		25	36	µA
I_{SUPHSS}	High side switch current - no load	Additional standby mode current from high side switch, no load.			110	µA
$I_{SUPWKRQ\_INH}$	WKRQ/INH current due to pull-down	Additional standby mode current due to the pull-down resister on the WKRQ/INH pin to determine pin function, 100 kΩ for WKRQ or 1 MΩ for INH.			95	µA
Regulated Output V_{CC}						
V_{CC}	Regulated output	V_{SUP} = 5.5 to 28 V, I_{CC} = 1 to 125 mA	-2.5		2.5	%
$\Delta V_{CC(\Delta VSUP)}$	Line regulation	V_{SUP} = 5.5 to 28 V, ΔV_{CC}, I_{CC} = 10 mA			50	mV
$\Delta V_{CC(\Delta VSUPL)}$	Load regulation	I_{CC} = 1 to 125 mA, V_{SUP} = 14 V, ΔV_{CC}			50	mV
V_{DROP1}	Dropout voltage (5 V LDO output)	V_{SUP} – V_{CC}, I_{CC} = 15 mA		100	150	mV
V_{DROP2}	Dropout voltage (5 V LDO output)	V_{SUP} – V_{CC}, I_{CC} = 125 mA		550	650	mV
V_{SC}	V_{CC} short circuit threshold to enter sleep mode	V_{SUP} ≥ V_{POR}		2	2.5	V
UV_{CC5R}	Under voltage 5 V V_{CC} threshold	Ramp Up		4.7	4.9	V
UV_{CC5F}	Under voltage 5 V V_{CC} threshold	Ramp Down	4.1	4.45		V
UV_{CC33R}	Under voltage 3.3 V V_{CC} threshold	Ramp Up		2.9	3.1	V
UV_{CC33F}	Under voltage 3.3 V V_{CC} threshold	Ramp Down	2.5	2.75		V