VBAT

SERIAL1
GPS
ESP32_UART_RX_GPS — R33 0R (1%)
ESP32_UART_TX_GPS — R34 0R (1%)

I [mA]

SERIAL2
GPRS
ESP32_UART_TX_GPRS — R35 0R (1%)
ESP32_UART_RX_GPRS — R36 0R (1%)

GPRS_ANT

SIM_RST

R19 10k (5%)

SOC1
A9G

2A peak

ESP32_GPIO_A9G_INIT

1	I2C2_SCL	
2	I2C2_SDA	
3	SD_D3	
4	SD_D2	
5	SD_D1	
6	SD_D0	
7	SD_CMD	
8	SD_CLK	
9	PWRKEY	
10	GND	
11	VBAT	
12	VBAT	
13	SPK_P	
14	SPK_N	

UART1_TXD 54
UART1_RXD 53
UART1_CTS 52
UART1_RTS 51
UART2_TXD 50
UART2_RXD 49
UART2_CTS 48
UART2_RTS 47
GPRS_RF 46
GND 45
VIO 44
GPRS_RST 43
42

SM0_CLK 41
VSM0 40
SM0_DIO 39
HST_RXD 38
HST_TXD 37
USB_P 36
USB_N 35
MIC_P 34
MIC_N 33
IO25 32
IO30 31
IO28 30
GND 29
GPS_RF 28

SIM_CLK
SIM_VDD
SIM_DATA
TP1
TP2

R45 10k (5%)

ADC0 15
ADC1 16
VUSB 17
RESET 18
LCD_CS 19
LCD_RST 20
LCD_DIO 21
LCD_SDC 22
LCD_SCK 23
IO29 24
IO26 25
IO27 26
GND 27

EP 55*2

R4 200k (1%)

R5 100k (1%)

ESP32_GPIO_A9G_RESET — R37 100R (1%)

Q4 SQ2310

R21 10k (5%)

R39 220R (5%)
GPRS STATE
LED1 LED green

R46 220R (5%)
GPS STATE
LED2 LED green

SIM_VDD

U6
ECLAMP2455P.TCT

SIM_RST 1 RST_OUT
SIM_CLK 2 CLK_OUT
SIM_DATA 3 DATA_OUT

VCC
RST_IN
CLK_IN
GND
DATA_IN 9

5
8
7
6

CN8
nano-SIM card socket

VCC
RST
CLK
GND
VPP
I/O
CHASSI

R49 1M (5%)
C23 4.7nF x 100V

L1 82nH

GPS_ANT — R52 0R (1%) — D — CN10

GPRS_ANT — R53 0R (1%) — D — CN11

DESIGN BY:
Tiago Silva
github.com/TiagoPaulaSilva/A9G-Arduino-Library

open hardware

PROJECT TITLE: A9G Minimal Hardware
SHEET TITLE:
DATE: 12/12/2022 19:33
SHEET: 1/1
REV.: