

## SPECIAL SPECIFICATION

### 1. FEATURES, ELECTROICAL SPECIFICATION (Ta=25°C)

- \* AVG-00001 are stand-alone module integrated a QCA6574AU and a SAMA5D27C-CNVAO
- \* QCA6574AU and SAMA5D27C-CNVAO are qualified to AEC-Q100 Grade 2
- \* QCA6574AU supports 802.11b/g/n 20MHz at 2.4GHz
- \* SAMA5D27C-CNVAO operates LINUX OS
- \* AVG-00001 is equipped with an internal PCB trace antenna
- \* Communication interface is UART

-	ITEM	SPEC.
1	RF Frequency Range	802.11b/g/n : 2412MHz ~ 2462MHz
2	Modulation	802.11b : DSSS 802.11g/n : OFDM
3	Supported Bandwidth	20MHz
4	Operating System	LINUX
5	Standard supply voltage	5.0V
6	Total Current (typ)	RX : 110mA TX : 200 ~ 800mA
7	Operation temperature	-40°C ~ + 105°C

## 2. ELECTRICAL CHARACTERISTICS

NO	CHARACTERISTIC	TEST CONDITION	802.11 Spec.	TYP.	UNIT
1	Conducted Transmit Power	802.11b Channel6 1Mbit/s	-	15	dBm
		802.11b Channel6 11Mbit/s		15	dBm
		802.11g Channel6 6Mbit/s		15	dBm
		802.11g Channel6 54Mbit/s		13	dBm
		802.11n Channel6 MCS0		15	dBm
		802.11n Channel6 MCS7		13	dBm
2	Transmit Center Frequency Tolerance	802.11b Channel6 1Mbit/s	-60000 ~ 60000	88	Hz
		802.11b Channel6 11Mbit/s		-2	Hz
		802.11g Channel6 6Mbit/s		-19	Hz
		802.11g Channel6 54Mbit/s		-13	Hz
		802.11n Channel6 MCS0		99	Hz
		802.11n Channel6 MCS7		151	Hz
3	Chip Clock Frequency Tolerance	802.11b Channel6 1Mbit/s	-25 ~ 25	-0.7	ppm
		802.11b Channel6 11Mbit/s		-0.3	ppm
	Symbol Clock Frequency Tolerance	802.11g Channel6 6Mbit/s		0	ppm
		802.11g Channel6 54Mbit/s		0	ppm
		802.11n Channel6 MCS0		0	ppm
		802.11n Channel6 MCS7		0	ppm
4	Transmit Modulation Accuracy	802.11b Channel6 1Mbit/s	≤35	3	%
		802.11b Channel6 11Mbit/s	≤35	3	%
	Transmitter Constellation Error	802.11g Channel6 6Mbit/s	≤-5	-19	dB
		802.11g Channel6 54Mbit/s	≤-25	-28	dB
		802.11n Channel6 MCS0	≤-5	-18	dB
		802.11n Channel6 MCS7	≤-27	-34	dB

5	Conducted Receiver Sensitivity	802.11b Channel6 1Mbit/s	≤-76	-93	dBm
		802.11b Channel6 11Mbit/s	≤-76	-86	dBm
		802.11g Channel6 6Mbit/s	≤-82	-89	dBm
		802.11g Channel6 54Mbit/s	≤-65	-72	dBm
		802.11n Channel6 MCS0	≤-82	-89	dBm
		802.11n Channel6 MCS7	≤-64	-68	dBm

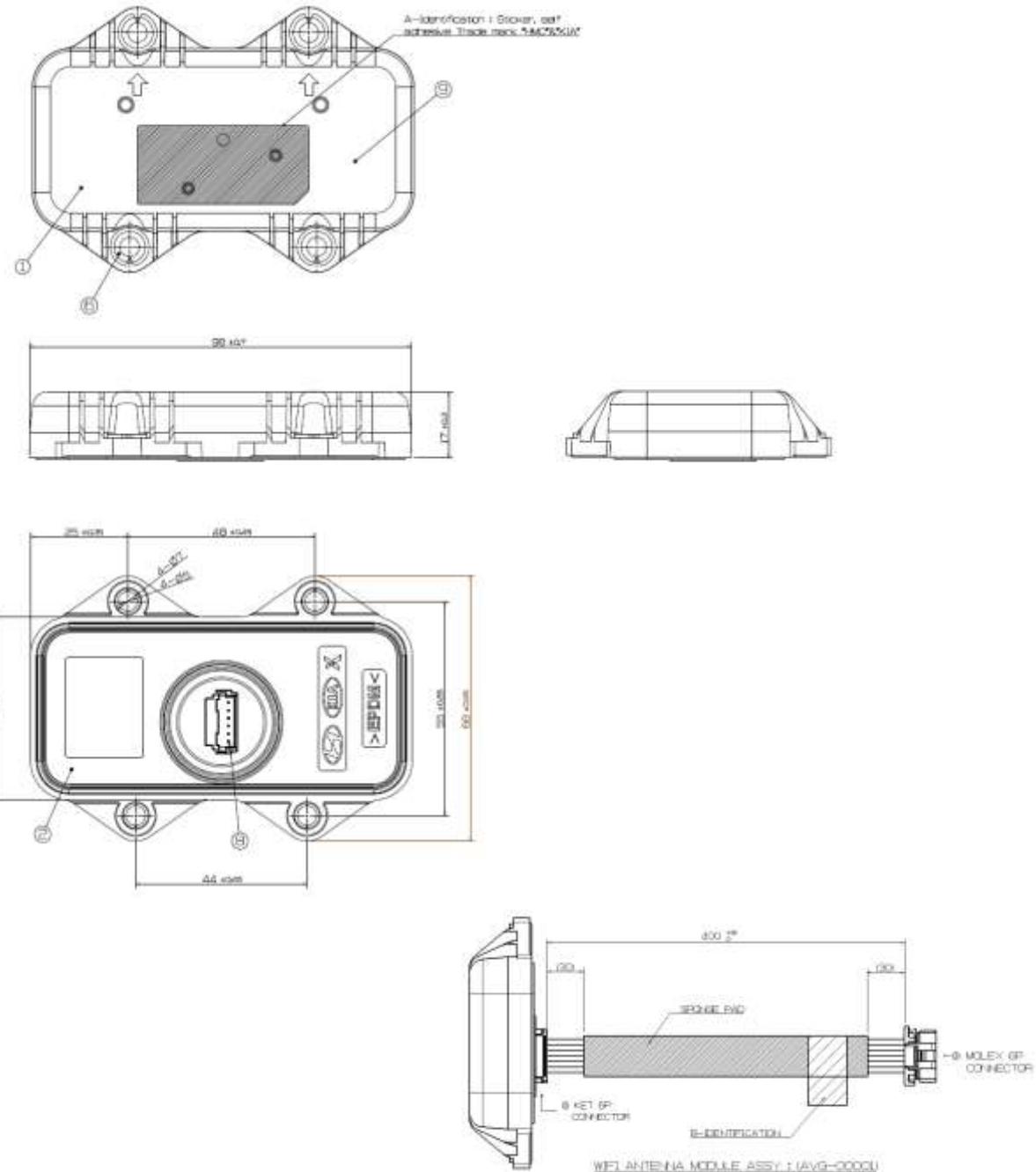
#### 4-1. Absolute Maximum Ratings

No	DESCRIPTION	SPEC.	UNIT
1	Supply Voltage	5.0	V
2	Range of Operating Temperature	-40 ~ + 105	°C
3	Range of Storage Temperature		
4	Interfaces	UART	

#### 4-2. Pin Connection

Pin	NAME	Description	I/O
1	VCC	Power supply 5.0V	P
2	GND	Ground	G
3	RESET	Reset signal input (active LOW)	I
4	Reserve	Reserve	I
5	UART RX	UART Data Input	I
6	UART TX	UART Data Output	O

NOTE : I/O I=Input, O=Output, P=Power Supply Voltage, G=Ground



PART LIST

NO	PART NAME	PART NO	MATERIAL	REMARKS
10 1	WIFI ANTENNA MODULE WIRE ASSY	—	—	WIRE : A635MF-03
9 1	A-IDENTIFICATION	—	PAPER (SILK)	43393
8 1	CONNECTOR	KET-M064500	—	(MALE TYPE)
7 1	SCREW	—	—	M2-TAPPING 6H+M2-80Y/INCH-4L
6 4	DUF BUSHING	DUF-0905-10	—	8515K0L
5 1	ANTENNA MODULE PCB ASSY	—	FR4	—
4 1	SHIELD CAN #B	—	NEONEL SILVER B# (C7250)	—
3 1	SHIELD CAN #A	—	NEONEL SILVER B# (C7250)	—
2 1	RUBBER PAD	—	EPDM	RE1000 (MS2629-03)
1 1	COVER	—	PP+GF30%	PC-PP30-001 TYPE A MS213-2B
NO	PART NAME	PART NO	MATERIAL	REMARKS

## **FCC Information to User**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## **Caution**

Modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**FCC Compliance Information :** This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation