

12x12x2mm passive ceramic antenna



Product Description

Part No.	Weight	Dimensions (L x W x H)	Color
M04-0102660R0A	1.5g	12*12*2mm	brown

Performance Characteristics

Items	Content
Nominal frequency MHz	1575.42 ± 1.023
*Center frequency MHz (on13mm*13mm ground Plane)	1575 ± 3.0
-10dB Bandwidth MHz min (Inside the machine equipment)	5.0
Return Loss at Center Frequency dB max (Inside the machine equipment)	-20.0
Gain (Zenith 90°) dBi type (Inside the machine equipment)	-3.0dB typ @13mm*13mm groundplane
Polarization Model	RHCP
Impedance	50 Ω
Axial Ratio dB max	3.0
Frequency Temperature Coefficient	20ppm/deg.°C max

* Center frequency : Circular polarization coupling points on square ground Plane.

Environment Condition

No.	Item	Test Condition	Remark
1	Humidity Test	The device is subjected to 90%~95% relative humidity $60^{\circ}\text{C} \pm 3^{\circ}\text{C}$ for 96h~98h, then dry out at $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$ and less than 65% relative humidity for 2h~4h. After dry out the device shall satisfy the specification in table 1.	It shall fulfill the specifications in Table 1.
2	High Temperature Exposure	The device shall satisfy the specification in table 1 after leaving at 105°C for 96h~98h, provided it would be measured after 2h~4h leaving in $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$ and less than 65% relative humidity.	It shall fulfill the specifications in Table 1.
3	Low Temperature	The device shall satisfy the specification in table 1 after leaving at -40°C for 96h~98h, provided it would be measured after 2h~4h leaving in $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$ and less than 65% relative humidity.	It shall fulfill the specifications in Table 1.
4	Temperature Cycle	Subject the device to -40°C for 30 min. followed by a high temperature of 105°C for 30 min cycling shall be repeated 5 times. At the room temperature for 1h prior to the measurement.	It shall fulfill the specifications in Table 1.
5	Vibration	Subject the device to vibration for 2h each in x、 y and z axis with the amplitude of 1.5mm, the frequency shall be varied uniformly between the limits of 10Hz~55Hz.	It shall fulfill the specifications in Table 1.
6	Soldering Test	Lead terminals are heated up to $350^{\circ}\text{C} \pm 10^{\circ}\text{C}$ for 5s ± 0.5 s with brand iron and then element shall be measured after being placed in natural conditions for 1 h. No visible damage and it shall fulfill the specifications in Table 1	It shall fulfill the specifications in Table 1.
7	Solder ability	Lead terminals are immersed in soldering bath of $260^{\circ}\text{C} \sim 290^{\circ}\text{C}$ for $3\text{s} \pm 0.5\text{s}$. More than 95% of the terminal surface of the device shall be covered with fresh solder.	The terminals shall be at least 95% covered by solder.
8	Terminal Pressure Strength	Force of 2kg is applied to each lead in axial direction for $10\text{s} \pm 1\text{s}$ (see drawing). No visible damage and it shall fulfill the specifications in Fig 1	Mechanical damage such as breaks shall not occur.

FIG 1

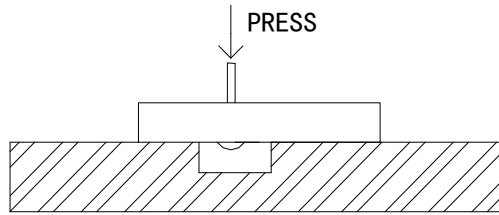


TABLE 1

Item	Specification After Test (MHz)
Center Frequency change	±2.0
-10dB Bandwidth Change	±2.0

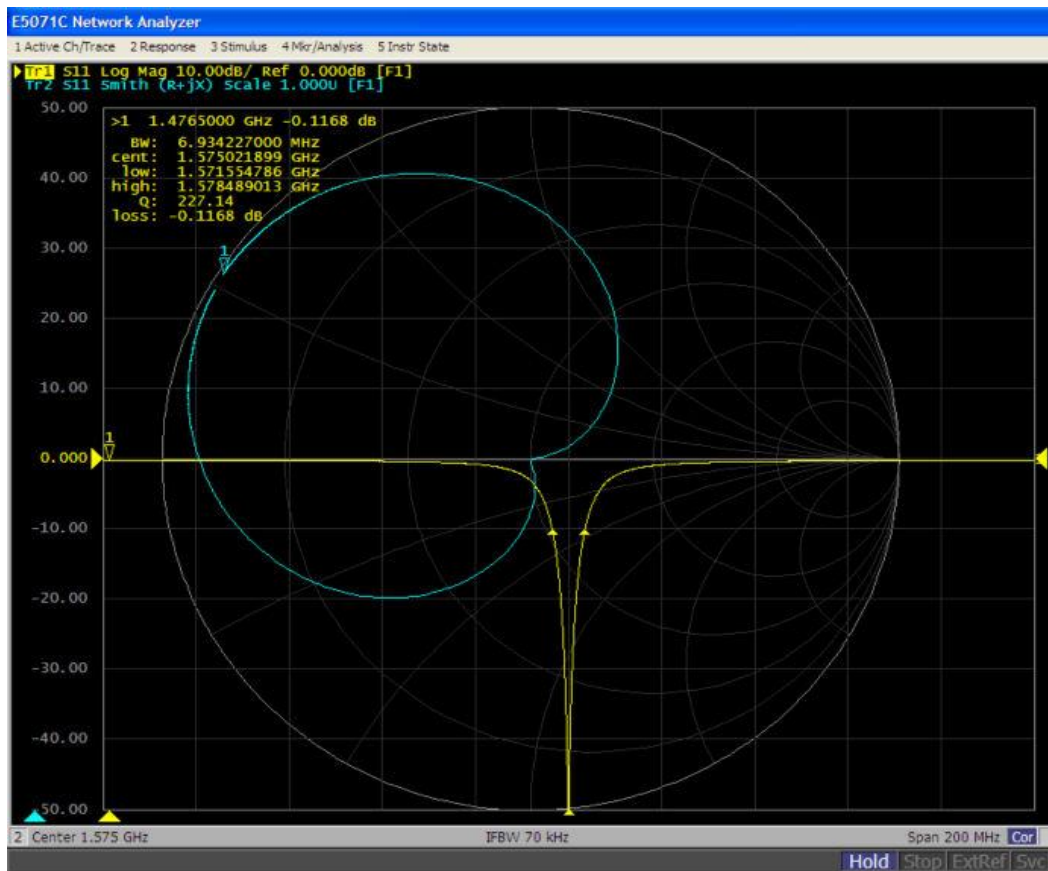
TEST

1、 Test Conditions

Parts shall be measured under a condition (Temp.:20°C±15°C, Humidity : 65%±20% R.H.).

2、 Test fixture

Groundplane size: Φ80mm



HOUSING CONFIGURATIONS

