

# L1+L2 passive ceramic antenna



## Product Description

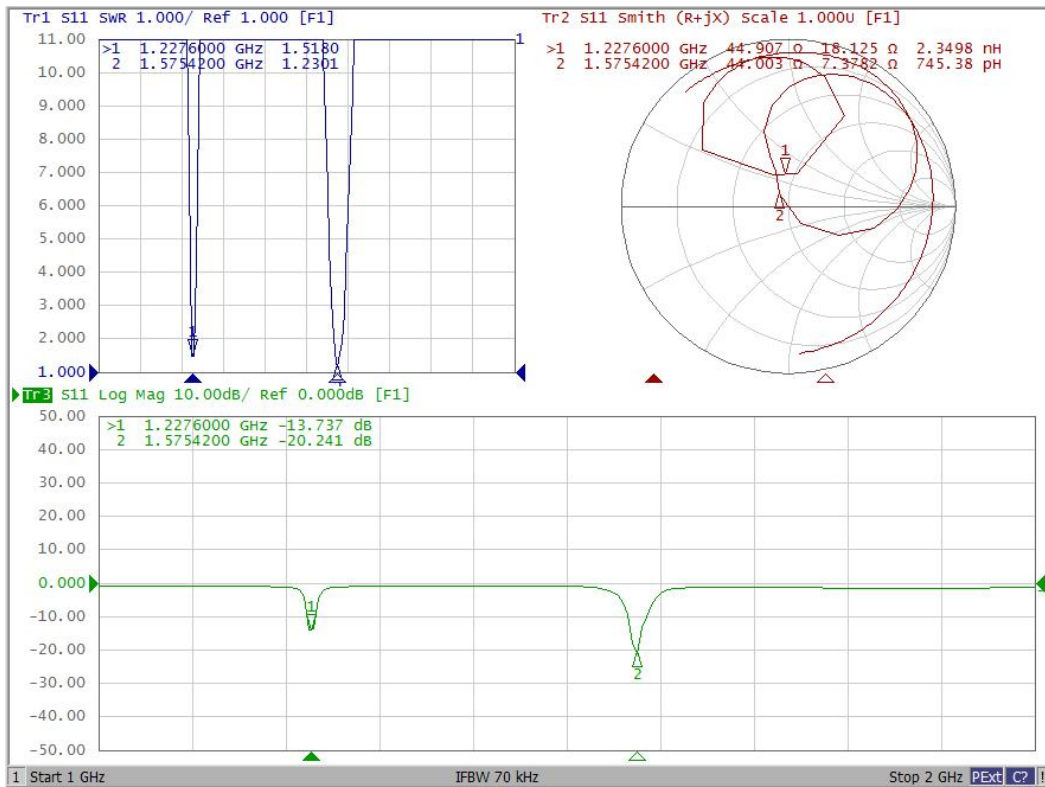
Part No.	Weight	Dimensions (L x W x H)	Color
M04-0103490R0A	18g	25*25*8.7mm	brown

## Performance Characteristics

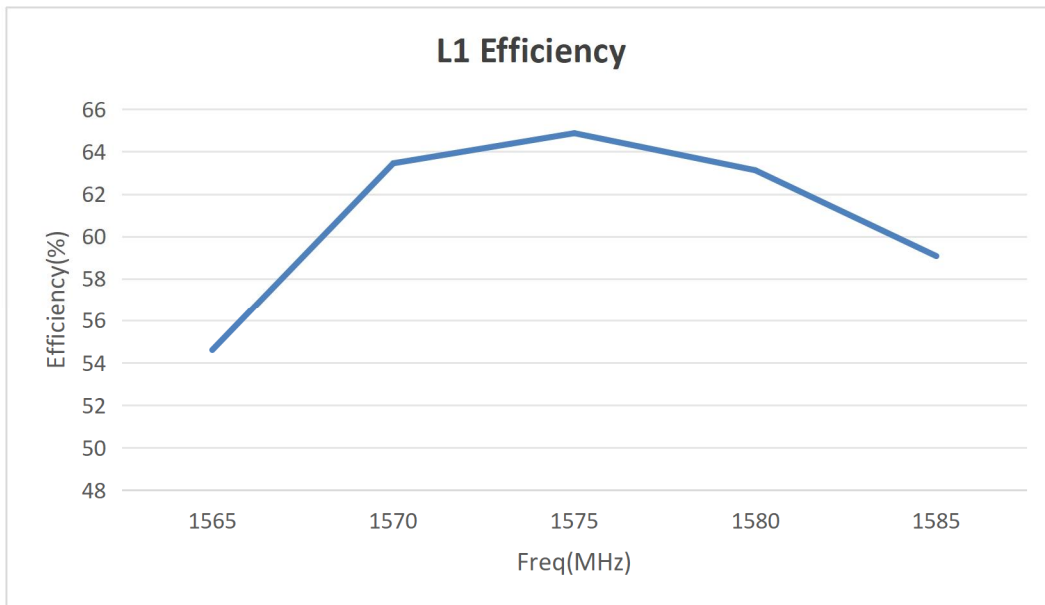
Items	Content
Antenna model	(25*25*4+18*18*4)mm
Frequency Range	L1:1575.42±5MHz L2:1227.60±1.5MHz
V.S.W.R	1.8MAX
-10dB Bandwidth min	L1:10 MHz L2:3 MHz
Passive Gain	L1:3.57dBic@Φ81mm ground plane L2:0.25 dBic@Φ81mm ground plane
-10dB Bandwidth min	L1:10 MHz L2:3 MHz
Polarization Model	RHCP
Impedance	50 Ω
Frequency Temperature Coefficient	20ppm/deg.°C max

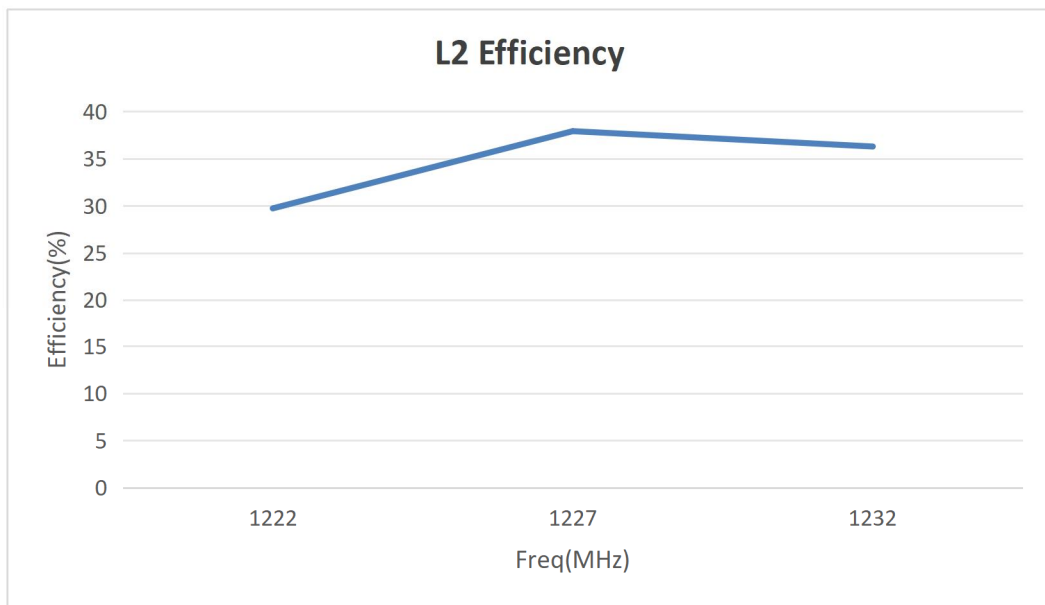
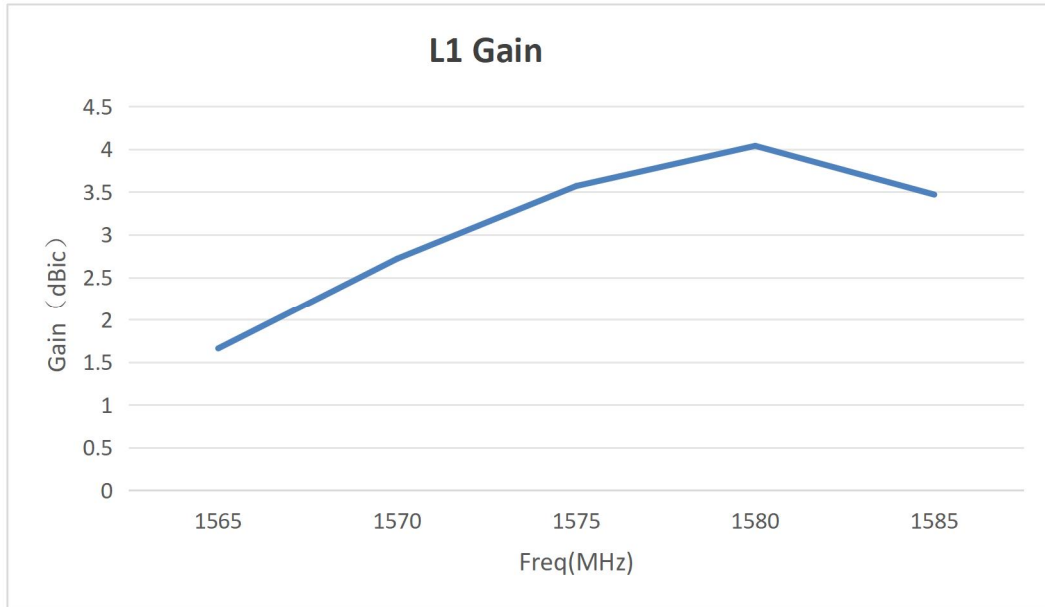
\* Center frequency :-10dB bandwidth center frequency. depend on the ground plane of customers.

Return loss Characteristic



Passive Gain (@Ø81mm ground plane)





Freq(MHz)	Gain (dBic)	Efficiency (%)
1222	-2.89	29.72
1227	0.23	37.91
1232	-0.68	36.28

Freq(MHz)	Gain (dBic)	Efficiency (%)
1565	1.66	54.6
1570	2.72	63.45
1575	3.57	64.87
1580	4.04	63.12
1585	3.47	59.07

## 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 $105^{\circ}\text{C}$ 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 $-40^{\circ}\text{C}$ 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 $-40^{\circ}\text{C}$ for 30 min. followed by a high temperature of $105^{\circ}\text{C}$ 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 $\pm 0.5$ 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

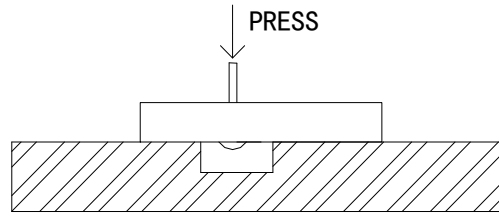


TABLE 1

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

HOUSING CONFIGURATIONS

