

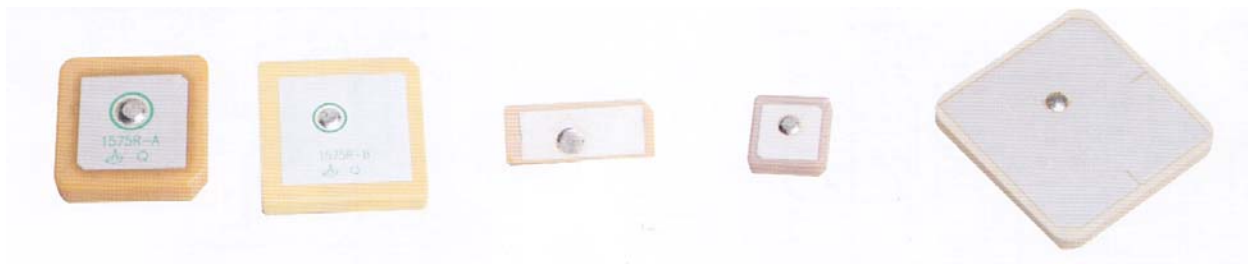


PRODUCT SPECIFICATION

REV O Dec 01 2016

Oscilent Controlled Document

Product Part Number	Product Description
Product Overview	Single Antenna



Contents

- o Part Number Builder
- o Product Options
- o Dimensions and Graphs
- o Environmental Testing
- o Caution of Use

Application

- o GPS
- o XM-Radios Satellites





Product Overview

Part Number Builder

Series Number	Select Frequency	Polarization Mode	Dimensions + Type	Frequency Tolerance	Individual Specification
-			-	-	-
1301= Square	1575= 1575.42 MHz	R = RHCP L = LHCP	e.g. 1840 = 18x18x4.0	015 = ±1.5 020 = ±2.0 025 = ±2.5 030 = ±3.0 050 = ±5.0 040 = ±4.0 100 = ±10.0 130 = ±13.0 150 = ±15.0 DF = Double Freq	Internal code for product structure, electrode shape, marking, and special parameters
1302= Rectangle	2338 = 2338 MHz	X = Linear Polarization	A = feeding pin position		

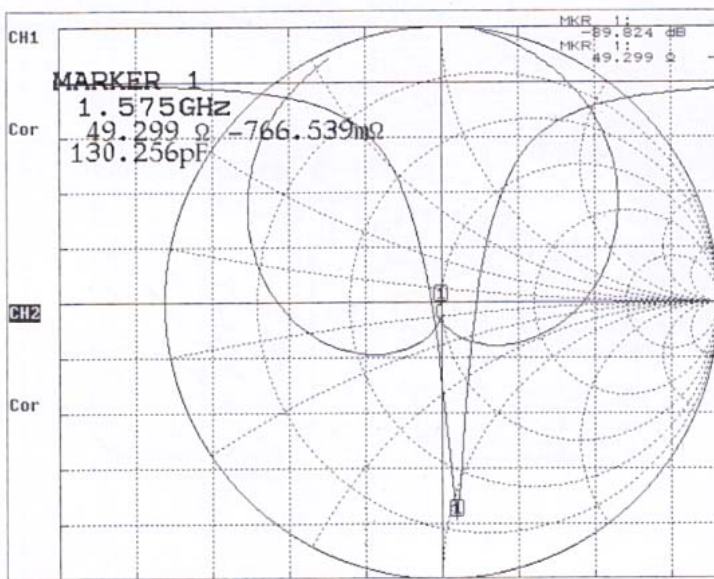
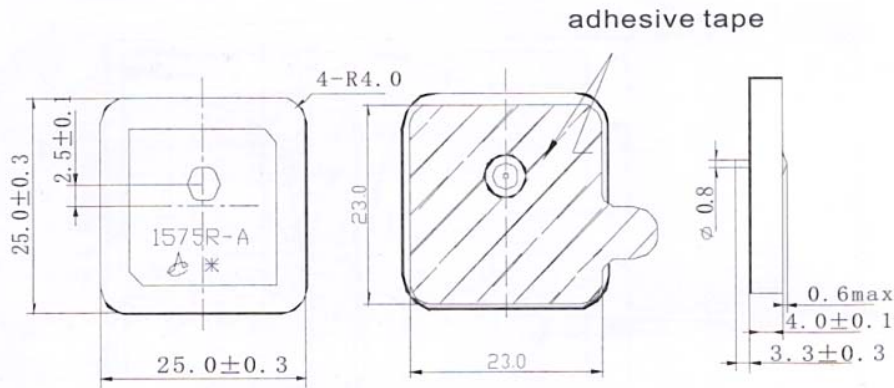
Product Options

Oscilent Part Number	Size (mm)	Nominal Frequency (MHz)	-10dB Bandwidth (MHz) min.	VSWR (in BW) max.	Ground Plane Size	Application
1301-1575R-35__A	35 x 35	1575.42	18.0	2.0	70 x 70	GPS
1301-1575R-25__A	25 x 25	1575.42	15.0	2.0	70 x 70	GPS
1301-1575R-25__B	25 x 25	1575.42	15.0	2.0	70 x 70	GPS
1301-1575R-20__A	20 x 20	1575.42	8.0	2.0	40 x 40	GPS
1301-1575R-18__A	18 x 18	1575.42	8.0	2.0	40 x 40	GPS
1301-1575R-18__B	18 x 18	1575.42	8.0	2.0	40 x 40	GPS
1301-1575R-15__A	15 x 15	1575.42	6.0	2.0	15 x 15	GPS
1301-1575R-15__B	15 x 15	1575.42	6.0	2.0	15 x 15	GPS
1301-1575R-13__A	13 x 13	1575.42	5.0	2.0	13 x 13	GPS
1301-1575R-12__A	12 x 12	1575.42	5.0	2.0	12 x 12	GPS
1301-1575R-10__A	10 x 10	1575.42	4.0	2.0	10 x 10	GPS
1302-1575X-2006__A	20 x 6	1575.42	-	-	20 x 6	GPS
1302-1575X-2006__B	20 x 6	1575.42	-	-	20 x 6	GPS
1302-1575X-1606__A	16 x 6	1575.42	-	-	16 x 6	GPS
1301-2338L-20__C	20 x 20	2338.00	56	2.0	26 x 50	XM-Radio Sat
1301-2338L-25__B	25 x 25	2338.00	46	2.0	70 x 70	XM-Radio Sat
1301-2338L-25__D	25 x 25	2338.00	56	2.0	40 x 40	XM-Radio Sat
1301-2338L-28__B	28 x 28	2338.00	120	2.0	45 x 60	XM-Radio Sat
1301-2338L-28__C	28 x 28	2338.00	160	2.0	70 x 70	XM-Radio Sat

* __ = enter product code for dimensional height (eg. Enter 40 for 4.0mm)



Dimensions and Graphs



* Contact Oscilent for additional drawings and graphs

**Environmental Testing**

Item	Test Condition	Remark	
Humidity Test	Subject to 90%~95% relative humidity $60^{\circ}\text{C}\pm 3^{\circ}\text{C}$ for 96h, then dry at $25^{\circ}\text{C}\pm 5^{\circ}\text{C}$, less than 65% relative humidity for 2h~4h.	It shall fulfill the specifications in Table 1.	
High Temperature Exposure	Satisfy the specification in table 1 after leaving at 105°C for 96h, measured within 2h~4h leaving in $25^{\circ}\text{C}\pm 5^{\circ}\text{C}$ and less than 65% relative humidity.		
Low Temperature	Satisfy the specification in table 1 after leaving at -40°C for 96h, measured with 2h~4h leaving in $25^{\circ}\text{C}\pm 5^{\circ}\text{C}$ and less than 65% relative humidity.		
Temperature Cycle	Subject the device to -40°C for 30 min. followed by a high temperature of 105°C for 30 min cycling repeated 5 times. At the room temperature for 1h prior to measurement.		
Vibration	Subject the device to vibration for 2h each in x, y and z axis with the amplitude of 1.5mm. Frequency shall vary uniformly between the limits of 10Hz~55Hz.		
Soldering Test	Lead terminals are heated up to $350^{\circ}\text{C}\pm 10^{\circ}\text{C}$ for $5\text{s}\pm 0.5\text{s}$ 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		
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.
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

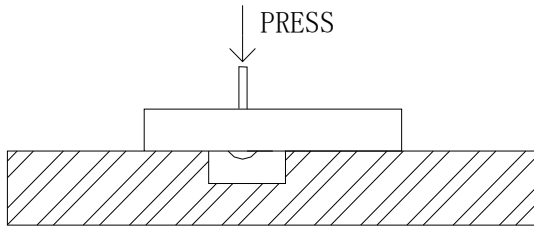


Table 1

Item	Specification After Test (MHz)
Center Frequency Change	±2.0

Caution of use

1. Do not apply excess mechanical stress to the component and terminals at soldering.
2. The component may be damaged when excess stress is applied.
3. This specification is based on the quality of the component as a single unit. Thoroughly evaluate the component in your application circuit.