

PA1575MZ50Q4G-XX-SMD

Series Engineering Specification

1. Application

Automotive, recreational , military, marine , aviation , surveying

2. Typical Electrical Properties (For Example : 1580MHz)

Characteristics	Specification	Unit	Conditions
Center Frequency f_0	1580.0 \pm 3.0	MHz	with 30mm Square ground plane
Bandwidth	6.0 min.	MHz	Return Loss \leq -10dB
Gain at Zenith	-1.65 typ.	dBic	@1580.0 MHz*
Gain at 10° elevation	-5.4 typ.	dBic	@1580.0 MHz*
Polarization	RHCP		
Impedance	50	Ω	
Frequency Temperature Coefficient	0 \pm 20	ppm/°C	-40°C to +85°C
Working Temperature			-40°C to +85°C

*: Any object around the patch could affect Center Frequency f_0 . INPAQ can offer technical support to decide the optimal center frequency.

**::PA1575MZ50Q4G-04-SMD, G: Green parts (RoHS compliance), 04 for f_0 = 1580 MHz

XX	f_0	XX	f_0	XX	f_0	XX	f_0	XX	f_0
00	1576	10	1586	20	1596	30	1606	40	1616
01	1577	11	1587	21	1597	31	1607	41	1617
02	1578	12	1588	22	1598	32	1608	42	1618
03	1579	13	1589	23	1599	33	1609	43	1619
04	1580	14	1590	24	1600	34	1610	44	1620
05	1581	15	1591	25	1601	35	1611	45	1621
06	1582	16	1592	26	1602	36	1612	46	1622
07	1583	17	1593	27	1603	37	1613	47	1623
08	1584	18	1594	28	1604	38	1614	48	1624
09	1585	19	1595	29	1605	39	1615	49	1625

UNLESS OTHER SPECIFIED TOLERANCES ON :

X= \pm X.X= \pm X.XX= \pm
 ANGLES= \pm HOLEDIA= \pm



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SCALE : UNIT : mm

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DESIGNED BY : 吳明怡 APPROVED BY : 曾源標

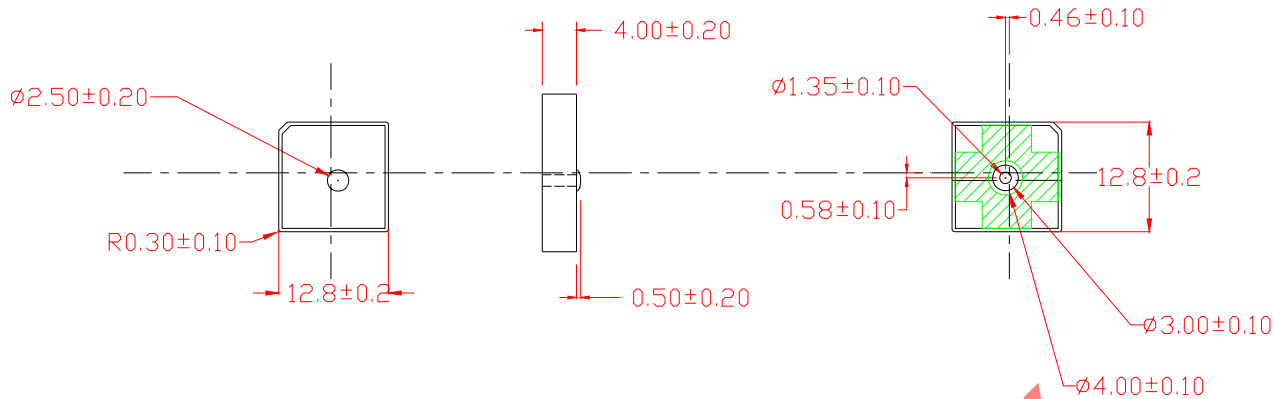
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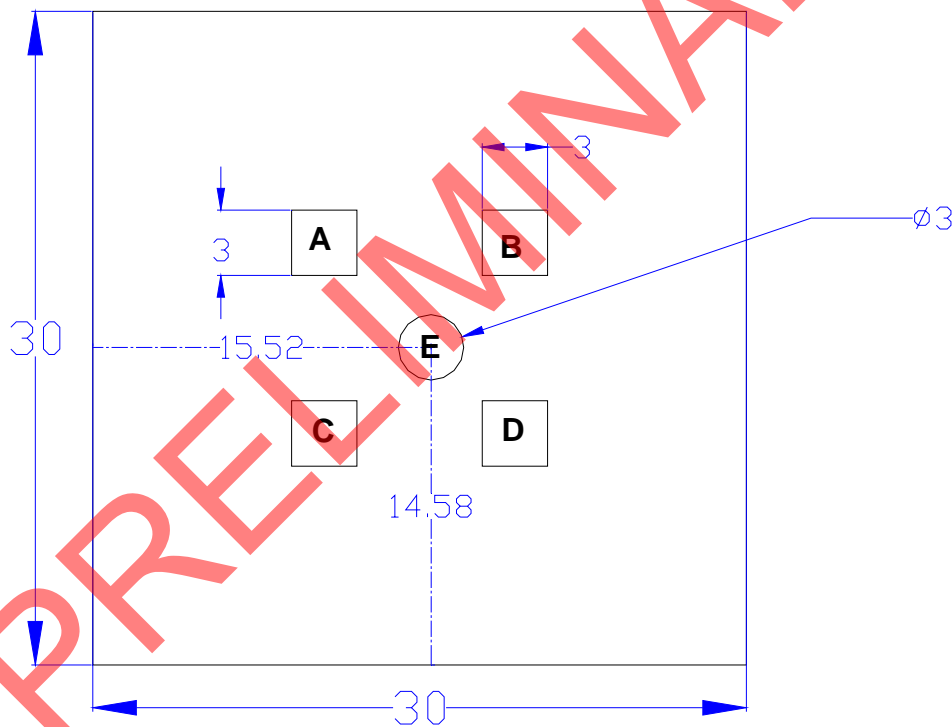
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 P0

3. Dimensions



Unit:mm

4. Test condition ground plane



A、B、C、D、E 為 SMT Solder Joint

Tolerance:±0.1mm

Unit:mm

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=± X.X=± X.XX=±
 ANGLES=± HOLEDIA=±



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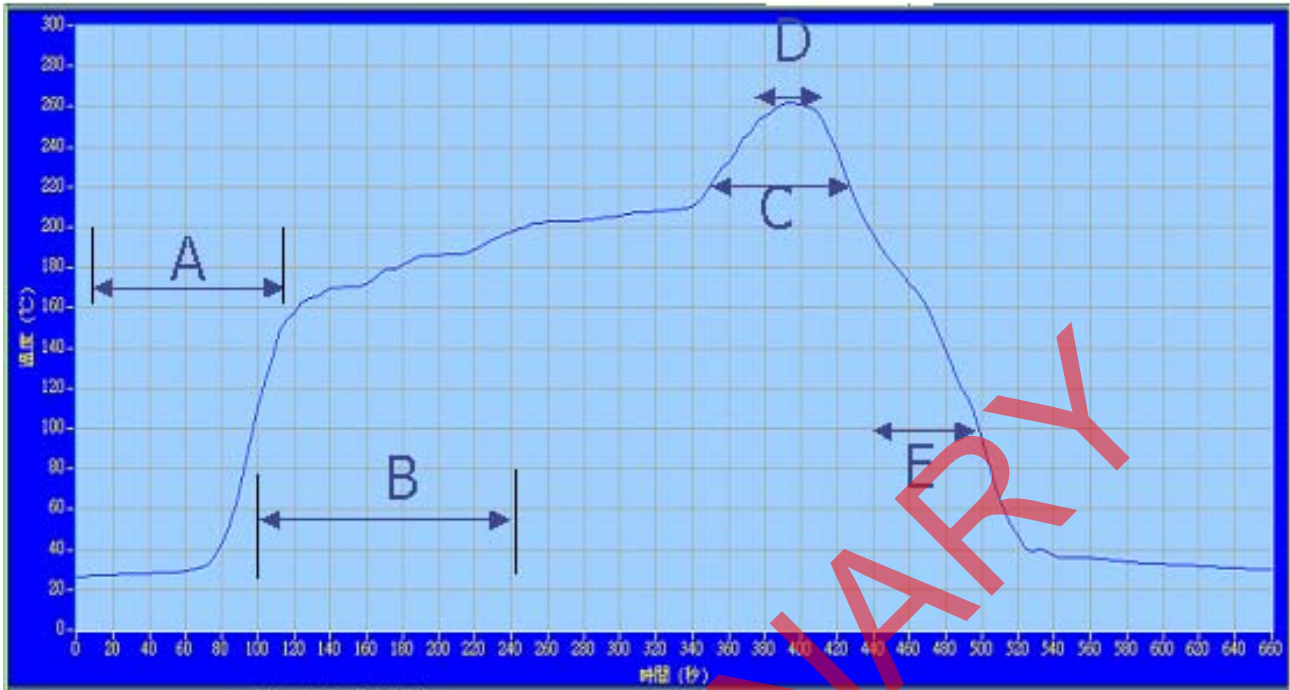
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SPEC REV. P0

5. Recommendable reflow soldering



A	rising temperature	The normal to Preheating	60s to 120s
B	Preheating	80°C to 200°C	140s to 150
C	temperature	220°C to 260°C to 220°C	80 to 90s
D	Main heating	if 260°C	20s~30s
E	Regular cooling	200°C to 100°C	1°C/s ~ 4°C/s

* The thickness of Solder should be controlled to be higher than 0.1 mm.

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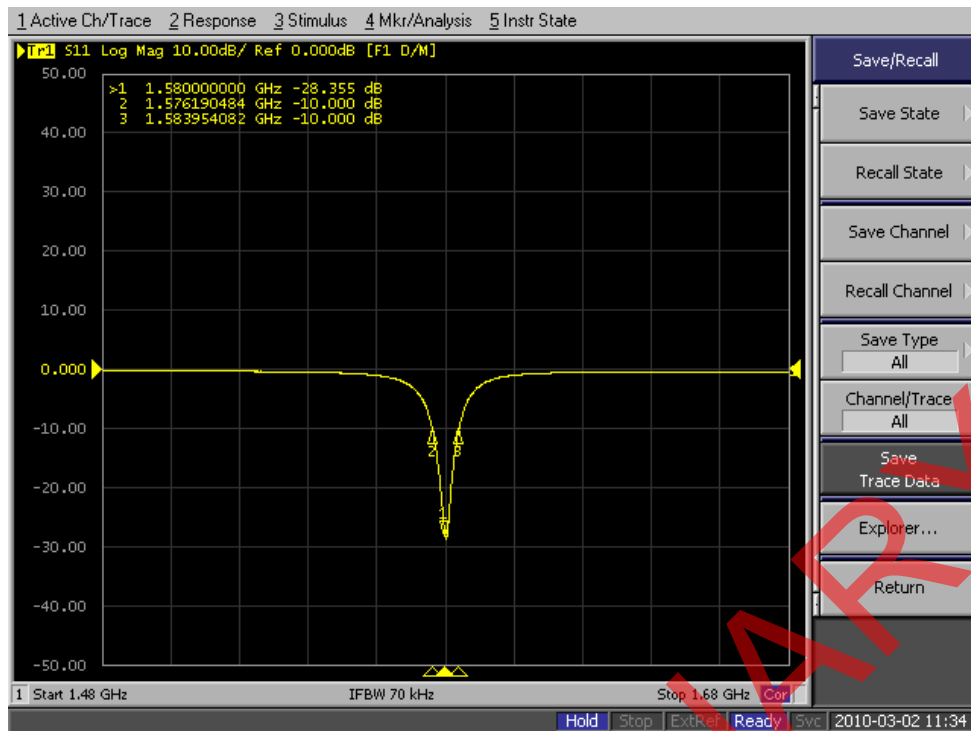


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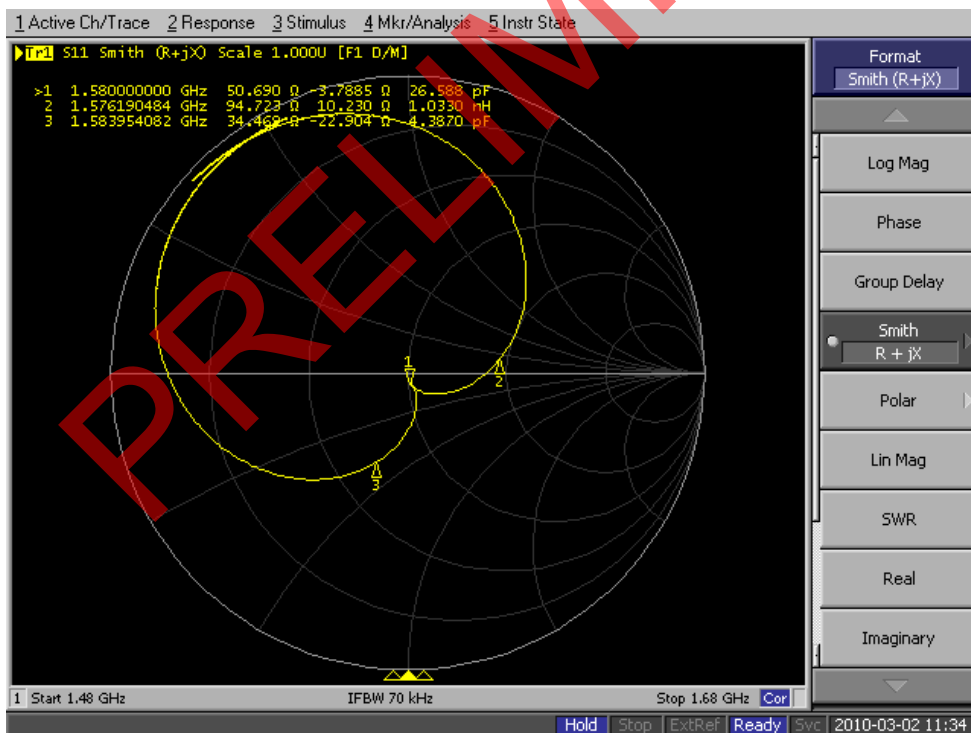
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6. Return Loss Characteristics (For Example : 1580MHz)



7. Measured Input Impedance on a Smith Chart (For Example : 1580MHz)



UNLESS OTHER SPECIFIED TOLERANCES ON :	
X=±	X.X=±
ANGLES=±	HOLEDIA=±
SCALE :	UNIT : mm
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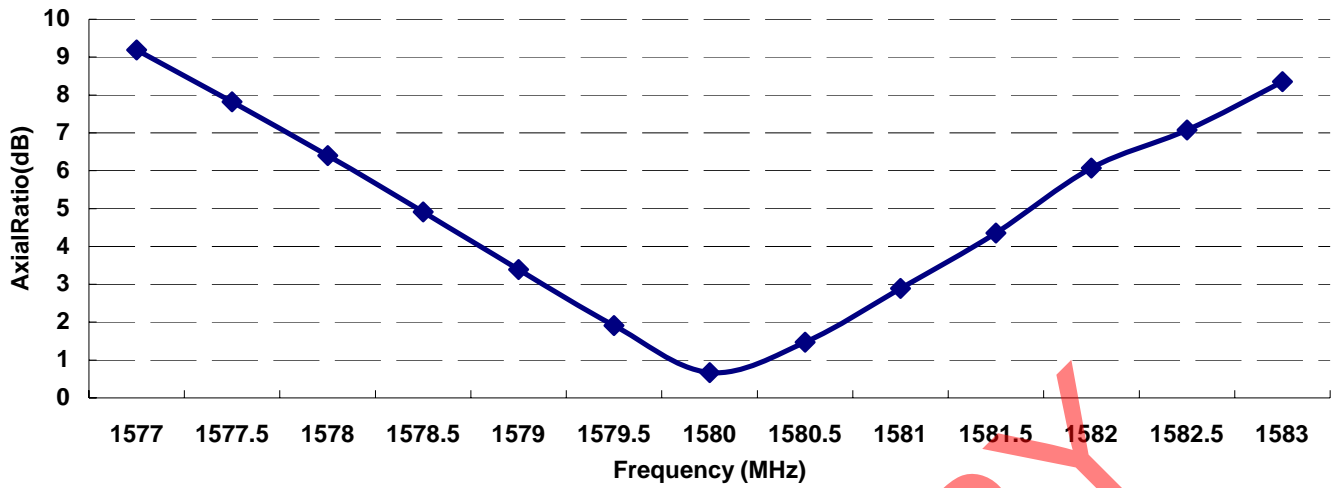


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		P0

8. Measured Axial Ratio (For Example : 1580MHz)



PRELIMINARY

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=± X.X=± X.XX=±
 ANGLES=± HOLEDIA=±



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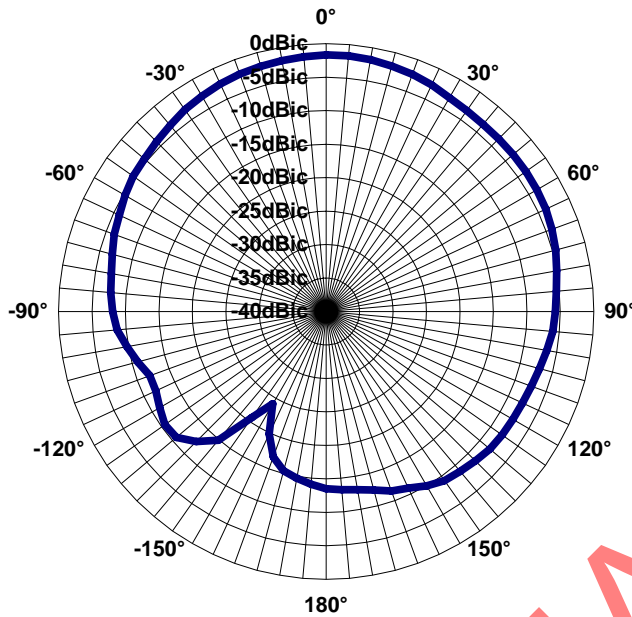
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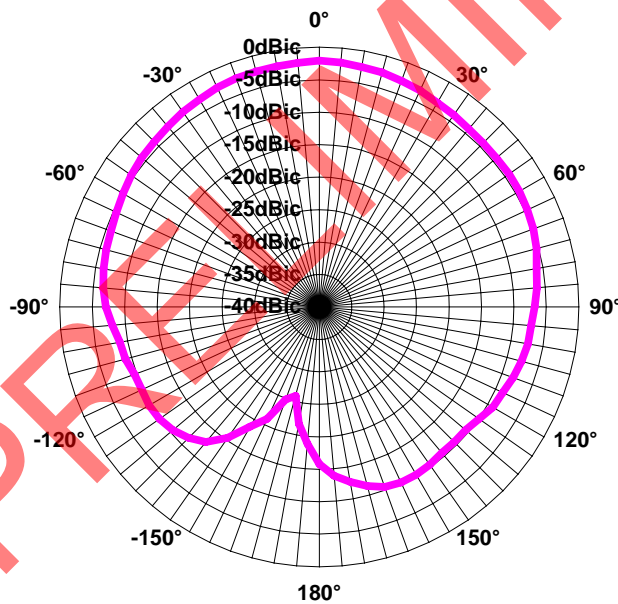
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9. The Normalized Antenna Gain Chart (For Example:1580MHz)

0°



90°



TX: Right hand circular polarized signal

Frequency = 1580MHz

Radiation Pattern (with 30mm square ground plane)

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