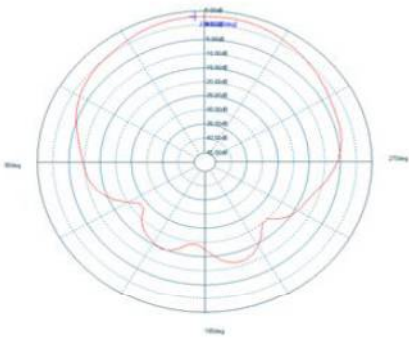
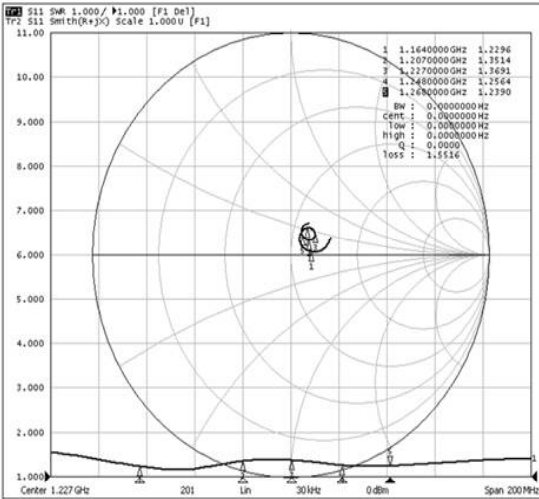


ECN/PCN No.: 3449

For Manufacturer																														
Product Description: GPS/Beidou/Glonass/Galileo/QZSS External Antenna		Abracon Part Number / Part Series: AEAGMK148060-S1575																												
Affected Revision: A		New Revision: B																												
Application		<input checked="" type="checkbox"/> Series <input type="checkbox"/> Part Number																												
Prior to Change: 1. N/A		<input type="checkbox"/> Safety <input checked="" type="checkbox"/> Non-Safety																												
After Change: 1. Gain and Axial Ratio values for specific frequencies 2. Radiation patterns for specific frequencies from table 3. Added return loss characteristic for 1.227 GHZ <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>4.0 Radiation Patterns</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr style="background-color: #0056b3; color: white;"> <th>Frequency, MHz</th> <th>Gain, dBic</th> <th>Axial Ratio</th> </tr> </thead> <tbody> <tr><td>1176</td><td>2.3</td><td>1.0</td></tr> <tr><td>1207</td><td>3.5</td><td>1.6</td></tr> <tr><td>1227</td><td>3.5</td><td>1.8</td></tr> <tr><td>1246</td><td>2.5</td><td>1.6</td></tr> <tr><td>1268</td><td>1.5</td><td>1.0</td></tr> <tr><td>1561</td><td>4.0</td><td>0.7</td></tr> <tr><td>1575</td><td>4.5</td><td>0.8</td></tr> <tr><td>1602</td><td>4.4</td><td>0.7</td></tr> </tbody> </table> <div style="text-align: center; margin-top: 10px;"> <p>1176 MHz</p>  </div> </div> <div style="width: 50%;">  </div> </div>				Frequency, MHz	Gain, dBic	Axial Ratio	1176	2.3	1.0	1207	3.5	1.6	1227	3.5	1.8	1246	2.5	1.6	1268	1.5	1.0	1561	4.0	0.7	1575	4.5	0.8	1602	4.4	0.7
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Cause/Reason for Change: Radiation patterns/gain & axial ratio values for specific frequencies, return loss characteristic addition																														

Engineering/Process Change Notice

Change Plan	Effective Date: 08/05/2019	Additional Remarks: N/A	
Change Declaration: Added Radiation Pattern images for specific frequencies along with gain and axial ratio values for the specified frequencies, added return loss characteristic for 1.227 GHZ			
Issued Date: 7/30/2019	Issued By: Daniel Montoya	Issued Department: Engineering	
Approval: Syed Raza Engineering VP	Approval: Reuben Quintanilla Quality Manager	Approval: Ying Huang Purchasing Director	
For Abracon EOL only			
Last Time Buy (if applicable): N/A		Alternate Part Number / Part Series: N/A	
Additional Approval: N/A	Additional Approval: N/A	Additional Approval: N/A	
Customer Approval (If Applicable)			
Qualification Status: <input type="checkbox"/> Approved <input type="checkbox"/> Not accepted Note: It is considered approved if there is no feedback from customer 1 month after ECN/PCN is released			
Customer Part Number:		Customer Project:	
Company Name:	Company Representative:	Representative Signature:	
Customer Remarks:			

GPS/Beidou/Glonass/Galileo/QZSS External Antenna

AEAGMK148060-S1575



ESD Sensitive



Ø148.0 x 60.0mm
RoHS/RoHS II Compliant

MSL = NOT APPLICABLE



FEATURES

- Gain of 4.5dBic
- Multiband
- RHCP polarization
- LNA gain of 38 dB
- Covers GPS (L1/L2/L5/L6), BEIDOU (B1/B2/B3), GLONASS (L1/L2), Galileo (L1/E5b/E5a), QZSS(L1/L2/L5/L6) bands

APPLICATIONS

- GPS
- Beidou
- GLONASS
- Galileo
- QZSS
- IoT
- Remote technology/monitoring
- M2M

ELECTRICAL SPECIFICATIONS

Parameters	Min.	Typ.	Max.	Units	Note
Frequency Range		1164-1300;1559-1615		MHz	GPS: L1/L2/L5/L6 BEIDOU: B1/B2/B3 GLONASS: L1/L2 Galileo: L1/E5b/E5a QZSS: L1/L2/L5/L6
VSWR		2.0			
Polarization		RHCP			Right Hand Circular Polarization
Impedance		50		Ω	
Gain		4.5		dBic	Zenith
Phase Center			2.0	mm	
Axial Ratio			2.0		Zenith
Operating Temperature	-40		+85	°C	

LOW NOISE AMPLIFIER (LNA)

Parameters	Min.	Typ.	Max.	Units	Note
DC Voltage		3.0 ~ 16.0		V	
DC current			30	mA	16mA @ 3.3V
Gain	36	38	40	dB	
Output VSWR		2.0		dB	
Out Band Rejection	40			dB	FH+100MHz FL-100MHz
Noise Figure			1.5	dB	



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
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REVISED: 08.12.2019

ABRACON IS
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GPS/Beidou/Glonass/Galileo/QZSS External Antenna

AEAGMK148060-S1575



ESD Sensitive



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OVERALL (Module + RF connector)

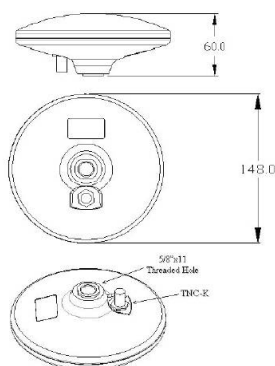
Parameters	Min.	Typ.	Max.	Units	Note
Output VSWR		2.0			
Gain		38		dB	
Impedance		50		Ω	

ENVIRONMENTAL CHARACTERISTICS:

Parameters	Description
Vibration	Sine sweep 1g(0-p) 10 to 55Hz 10Hz each axis
Storage Temperature	-55 °C to +85 °C
ROHS	ROHS Compliant
MSL Level	N/A
ESD Sensitive	This device is ESD sensitive
Handling	No special handling conditions
Ingress Protection	IP66

MECHANICAL DIMENSIONS

No.	Parameters	Description
1	Antenna	PTFE F4B-1/2
2	PCB	FR4
3	Shielding	Tinplate
4	RF Connector	TNC-K
5	Threaded Hole	Copper
6	Plastic Shell	ABS



Unit: mm



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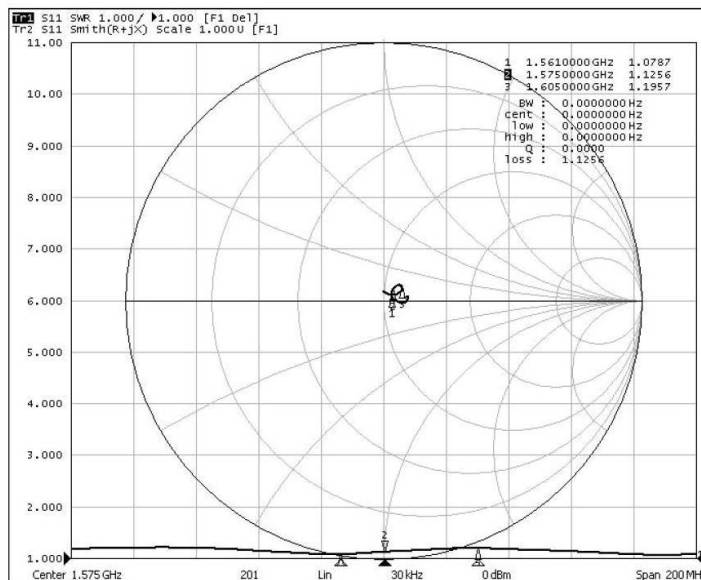
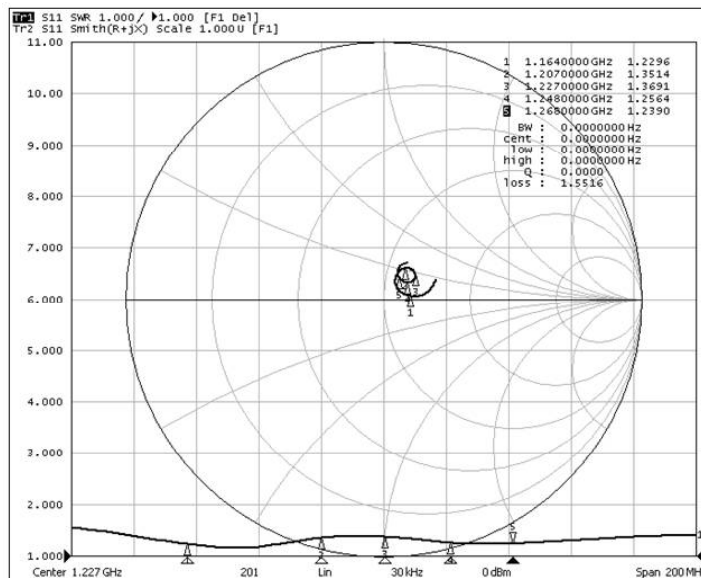
Ø148.0 x 60.0mm
RoHS/RoHS II Compliant

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RETURN - LOSS CHARACTERISTICS

S11 Return Loss



GPS/Beidou/Glonass/Galileo/QZSS External Antenna



AEAGMK148060-S1575



ESD Sensitive



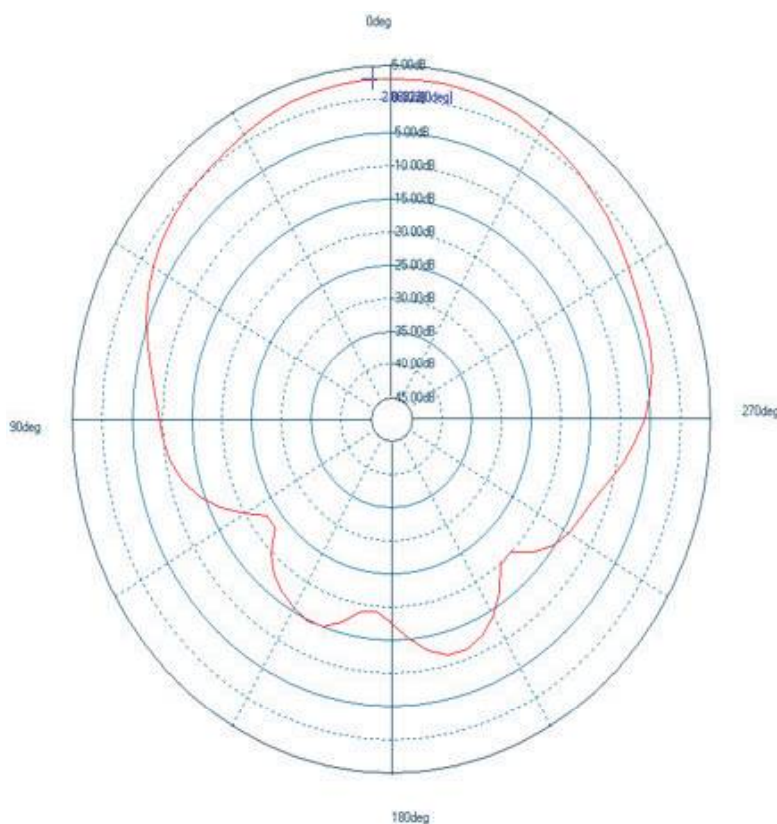
Ø148.0 x 60.0mm
RoHS/RoHS II Compliant

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RADIATION PATTERNS

Frequency, MHz	Gain, dBic	Axial Ratio
1176	2.3	1.0
1207	3.5	1.6
1227	3.5	1.8
1246	2.5	1.6
1268	1.5	1.0
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1602	4.4	0.7

1176 MHz



GPS/Beidou/Glonass/Galileo/QZSS External Antenna

AEAGMK148060-S1575



ESD Sensitive



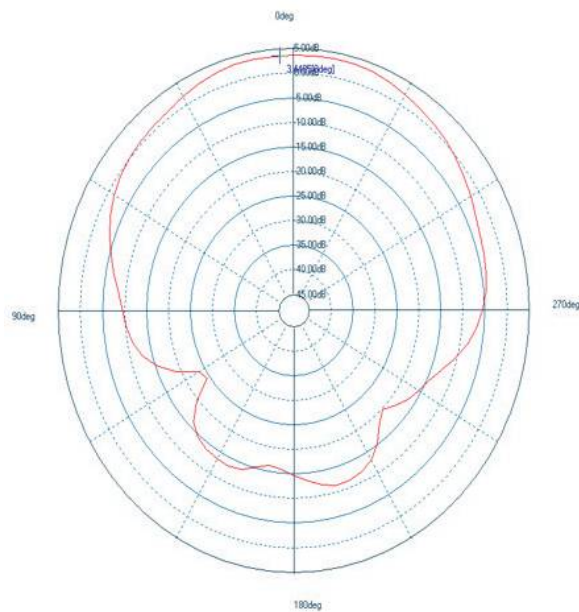
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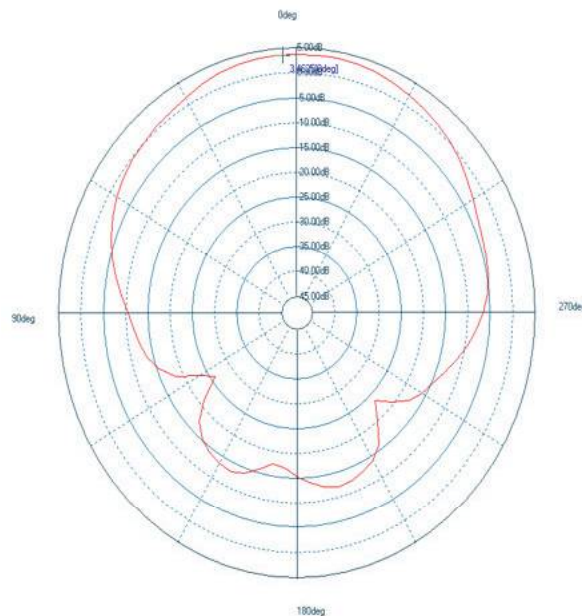


RADIATION PATTERNS

1207 MHz



1227 MHz



GPS/Beidou/Glonass/Galileo/QZSS External Antenna

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ESD Sensitive



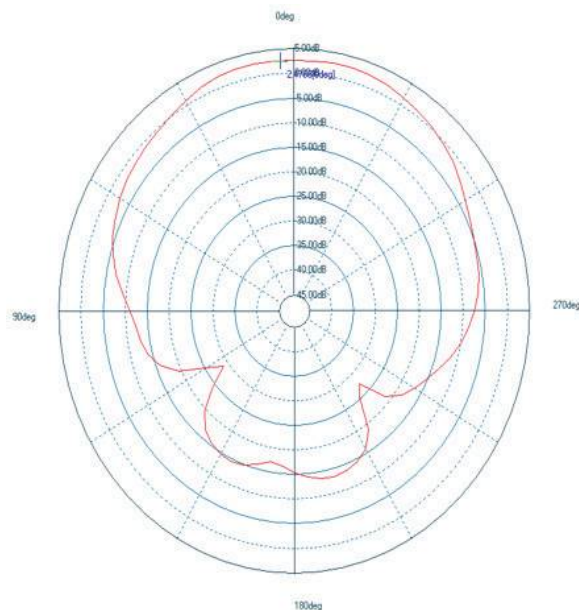
Ø148.0 x 60.0mm
RoHS/RoHS II Compliant

MSL = NOT APPLICABLE

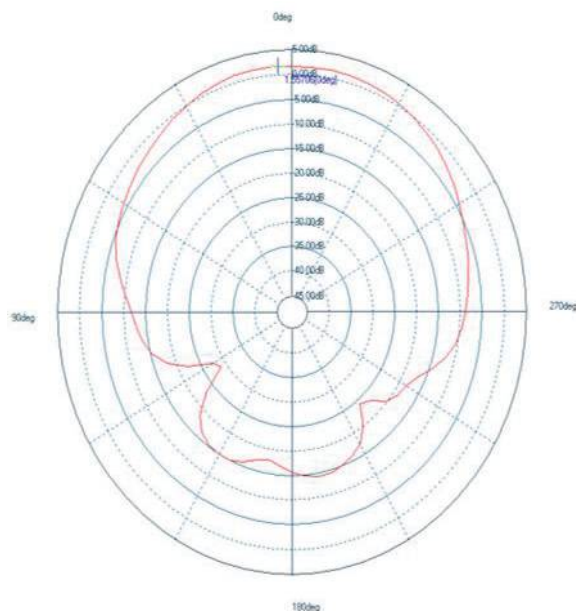


RADIATION PATTERNS

1246 MHz



1268 MHz



GPS/Beidou/Glonass/Galileo/QZSS External Antenna

AEAGMK148060-S1575



ESD Sensitive



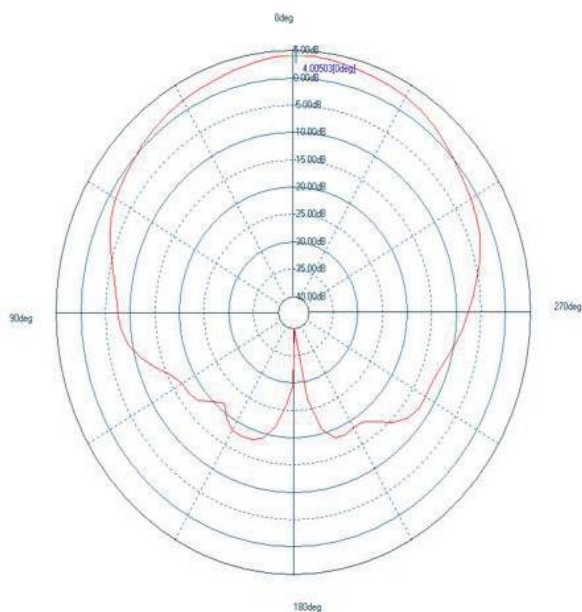
Ø148.0 x 60.0mm
RoHS/RoHS II Compliant

MSL = NOT APPLICABLE

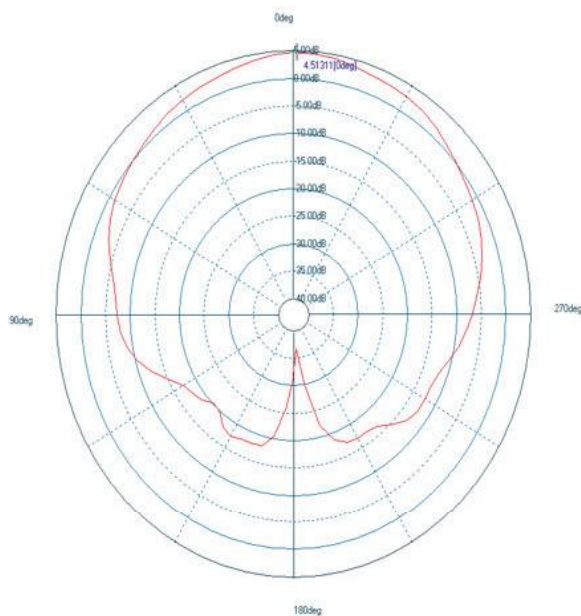


RADIATION PATTERNS

1561 MHz



1575 MHz



GPS/Beidou/Glonass/Galileo/QZSS External Antenna

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ESD Sensitive

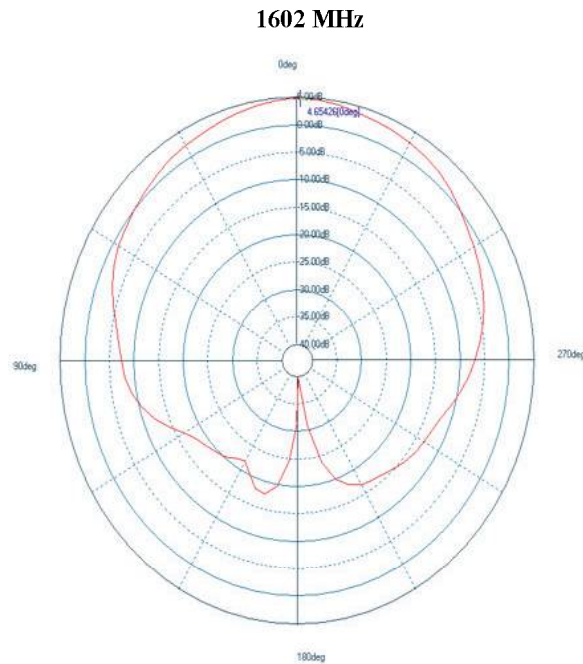


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RADIATION PATTERNS



GPS/Beidou/Glonass/Galileo/QZSS External Antenna

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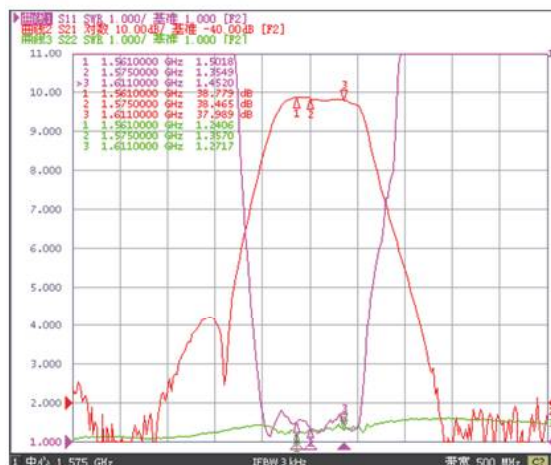
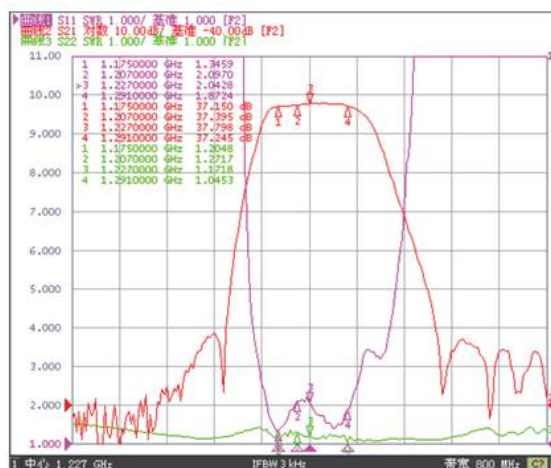
ESD Sensitive



Ø148.0 x 60.0mm
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LNA TEST CURVE



Test Condition: 3.3V DC

PACKAGING:

Each 630 x 460 x 105 mm size carton includes 6 pcs antenna, each case 1 pcs antenna.



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