



LB-SJ-40180-SF Broadband Dual Polarization Horn Antenna 4-18GHz  
14dB Gain SMA Female

Broadband Dual Polarization Horn Antenna Operating From 4GHz to 18GHz With a Nominal 14dB Gain With SMA Female Connector

### Product Information

SKU	LB-SJ-40180-SF
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### Description

Broadband Dual Polarization Horn Antenna LB-SJ-40180-SF, operating from 4 to 18GHz with a nominal 14dB gain and low VSWR 1.50:1 with SMA Female output connector. The model LB-SJ-40180-SF has uniform gain through its frequency span, providing efficient performance characteristics and directionality. It can handle 25W continuously and 50W peak power. Constructed of lightweight corrosion-resistant aluminum, the antenna will provide years of trouble-free indoor and outdoor service. This horn antenna has dual linear polarization and ideally suited for EMI testing, direction finding, surveillance, antenna gain and pattern measurements and other applications.

### Technical Specification

Electrical Specification	
Frequency, Min (GHz)	4
Frequency, Max (GHz)	18
Gain, Typ (dBi)	14
Polarization	Dual Linear
3dB Beamwidth, E-Plane, Min (Deg.)	24
3dB Beamwidth, E-Plane, Max (Deg.)	75
3dB Beamwidth, H-Plane, Min (Deg.)	19
3dB Beamwidth, H-Plane, Max (Deg.)	66
Cross Pol. Isolation, Min (dB)	20
Cross Pol. Isolation, Typ (dB)	30
Port to Port Isolation, Min (dB)	30
Port to Port Isolation, Typ (dB)	35
VSWR, Typ	1.5:1
Impedance, (Ohm)	50
Power Handling, CW, (W)	25
Power Handling, Peak, (W)	50

Interface	
Output Type	Coaxial
Connector	SMA
Connector Gender	Female
Mechanical Specification	
Body Material	Al
Finish	Chemical Conversion Coating
Size, W (mm)	107.7
Size, H (mm)	107.7
Size, L (mm)	132
Weight, (kg)	0.45

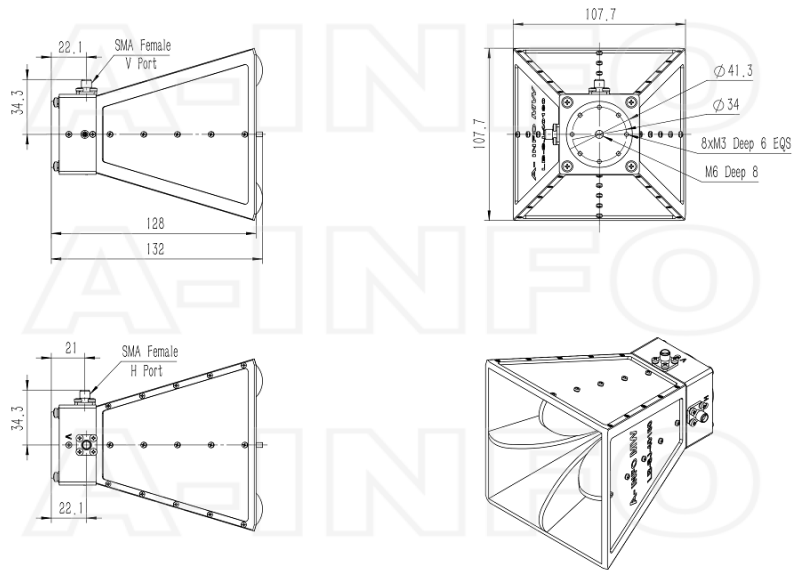
### Additional Information

Application	General Purpose Indoor & Outdoor, Fixed
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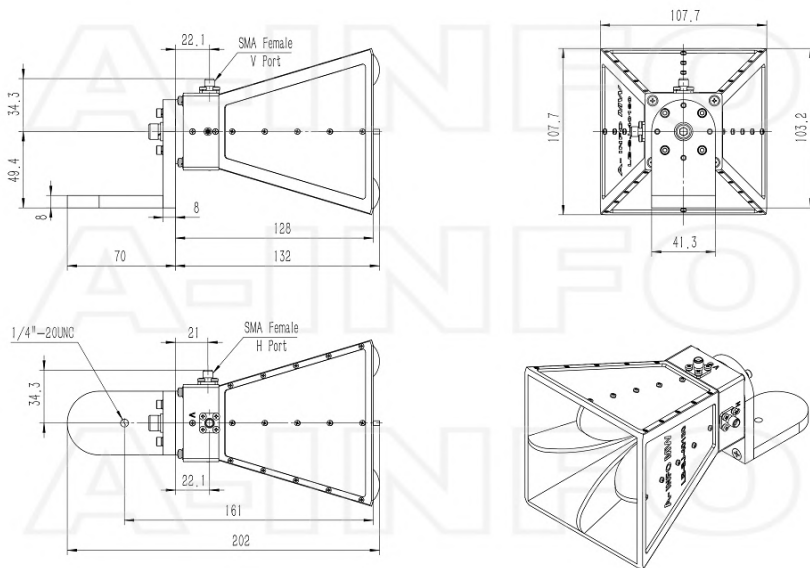
Solution for	Antenna Measurement Reflector Feed Far-field Measurement Planar Near-Field Measurement Cylindrical Near-Field Measurement Spherical Near-Field Measurement CATR System Intergration
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## Outline Drawing

SMA-Female Output (P/N: LB-SJ-40180-SF)

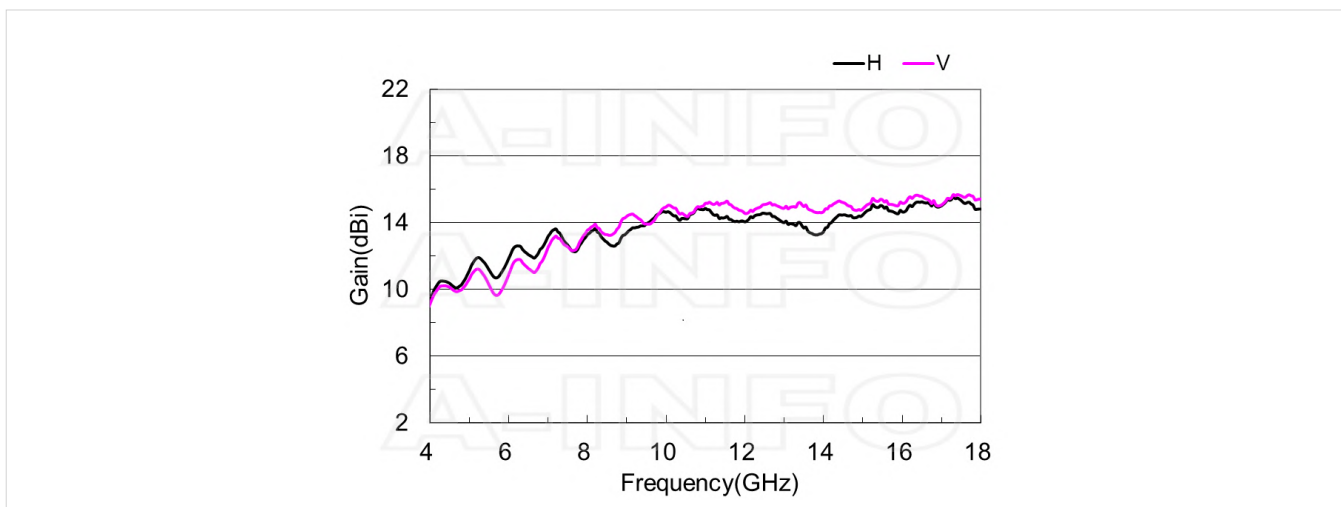


SMA-Female Output with L Type Mounting Bracket (Option, P/N: LB-20180-L)

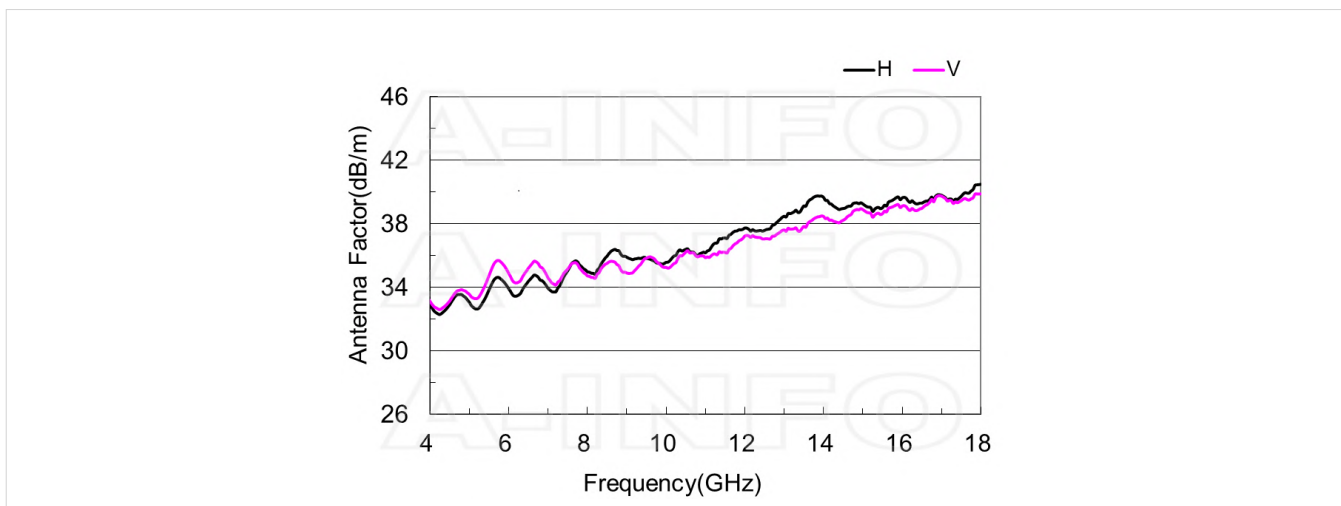


## Typical Test Results

### Gain



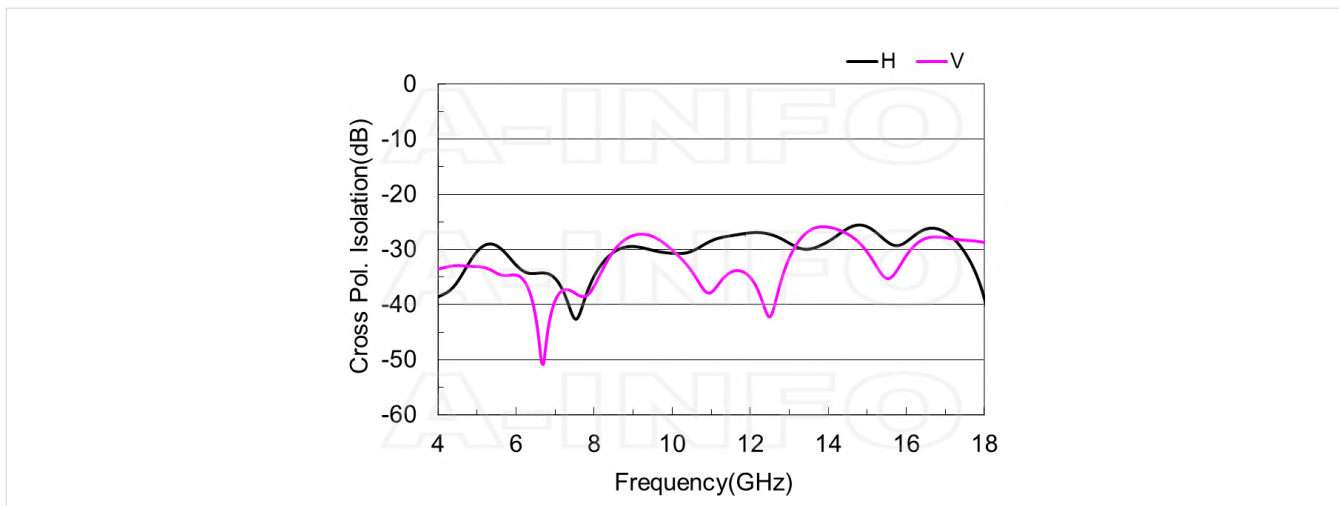
### Antenna Factor



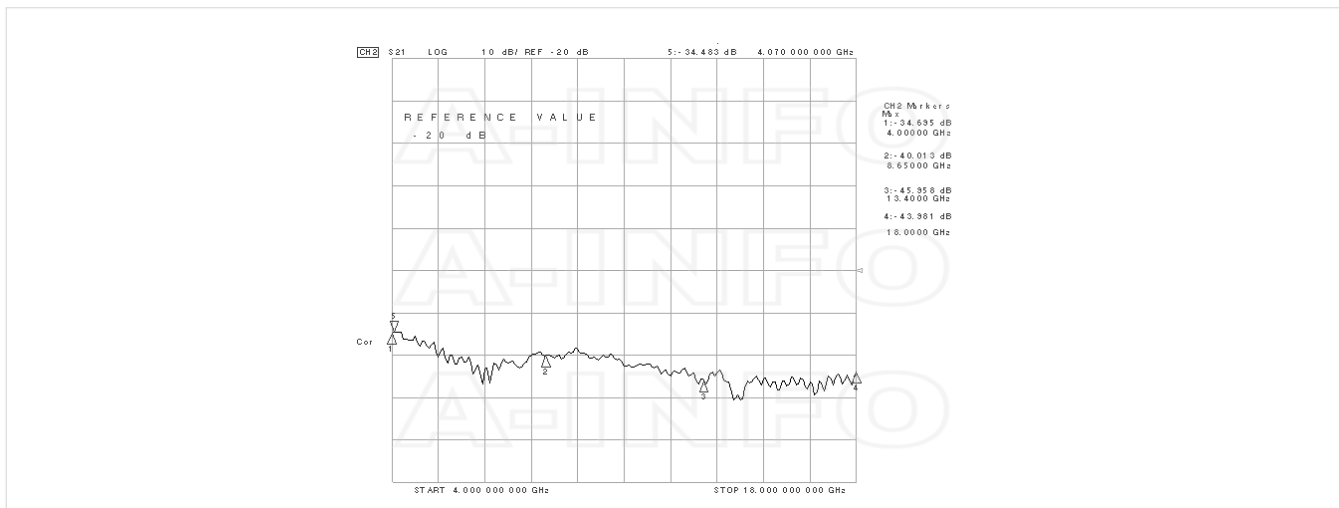
### Antenna Factor (Table)

Frequency(GHz)	Horizontal		Vertical	
	Gain(dBi)	AF(dB/m)	Gain(dBi)	AF(dB/m)
4.0	9.27	32.98	9.12	33.13
5.0	11.12	33.07	10.62	33.57
6.0	11.85	33.92	10.89	34.89
7.0	13.18	33.94	12.52	34.59
8.0	13.29	34.98	13.55	34.72
9.0	13.39	35.90	14.39	34.91
10.0	14.63	35.58	14.95	35.26
12.0	14.05	37.74	14.56	37.23
14.0	13.46	39.67	14.66	38.47
16.0	14.65	39.64	15.17	39.13
18.0	14.82	40.49	15.42	39.90

## Cross Polarization Isolation

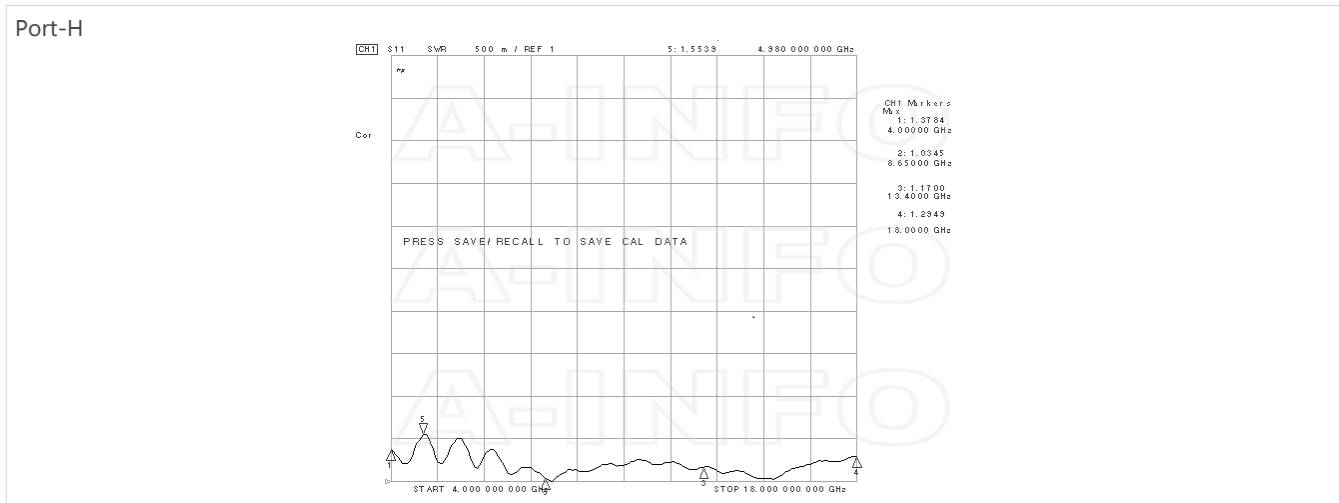


## Port to Port Isolation

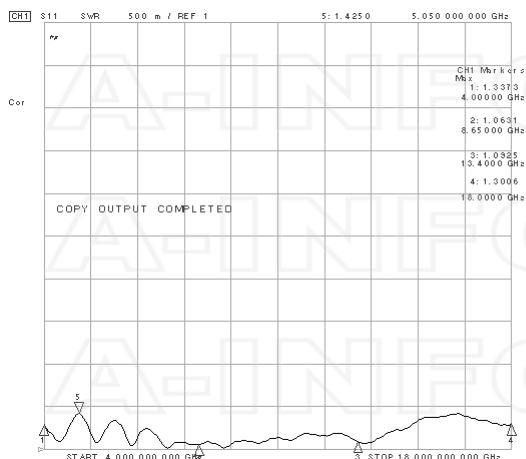


## VSWR

### Port-H

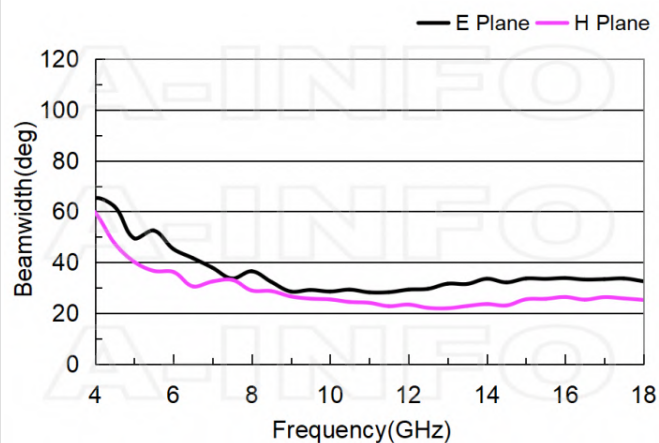


Port-V

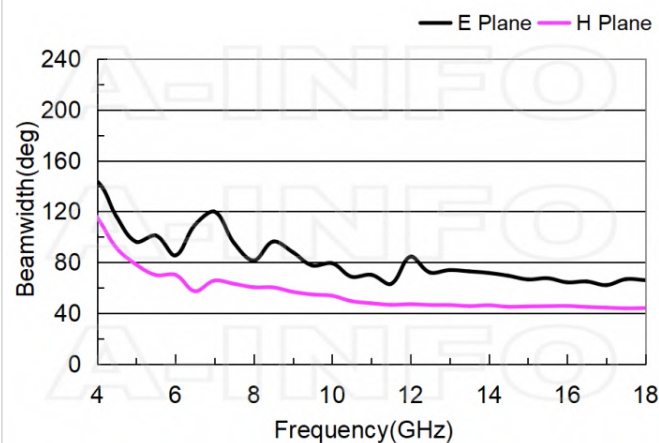


### Beamwidth

3dB Beamwidth

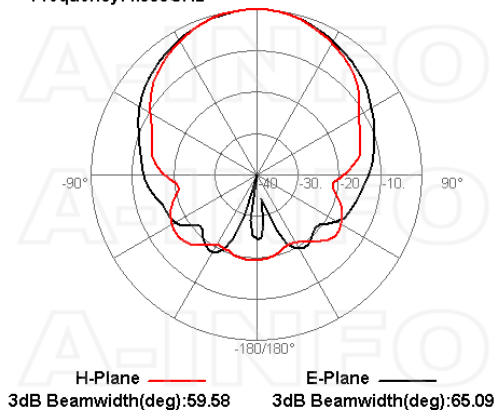


10dB Beamwidth

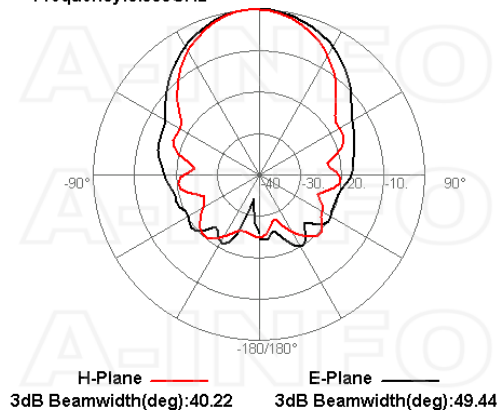


### Pattern 1

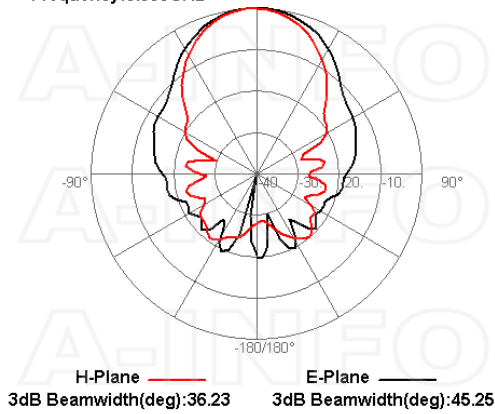
Frequency:4.000GHz



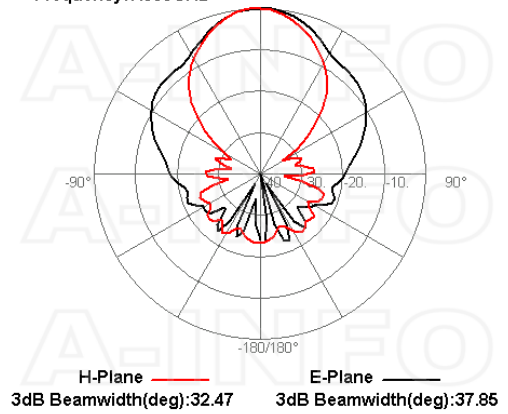
Frequency:5.000GHz



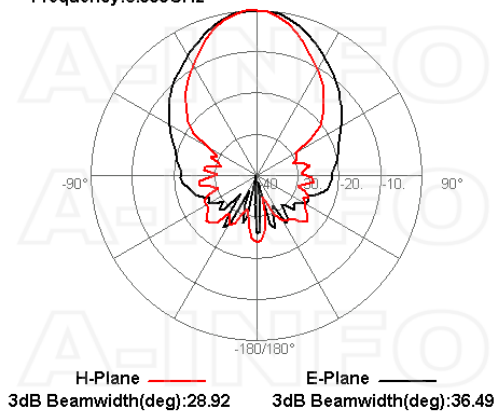
Frequency:6.000GHz



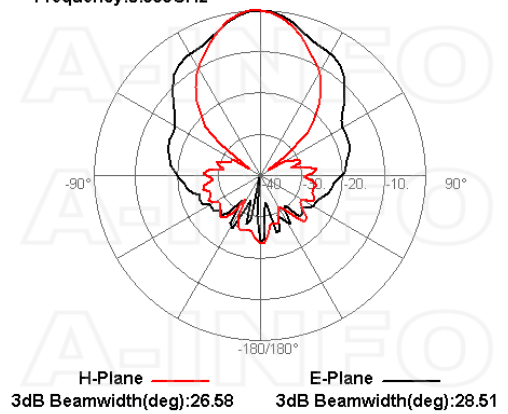
Frequency:7.000GHz



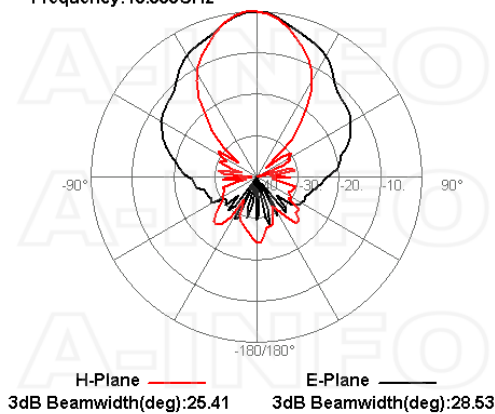
Frequency:8.000GHz



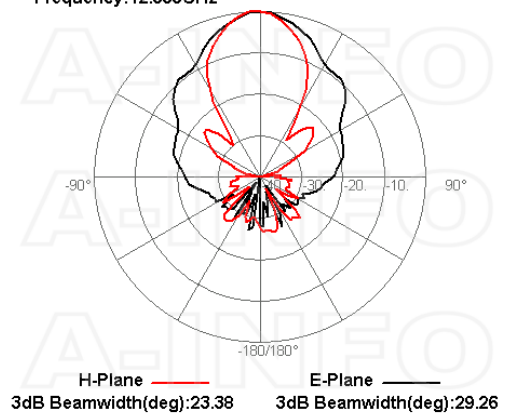
Frequency:9.000GHz

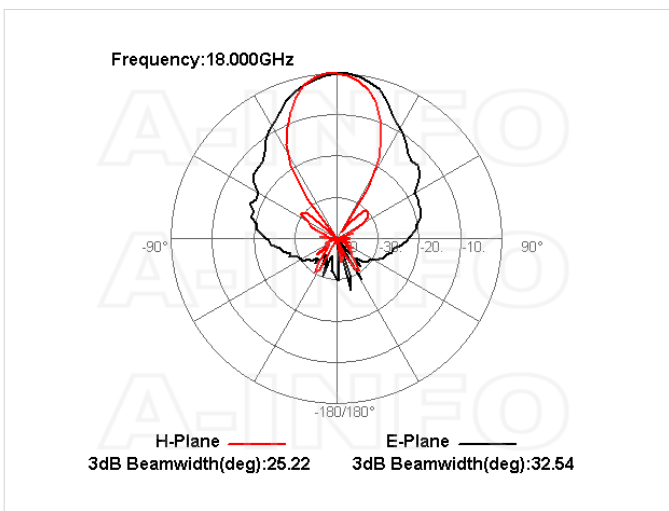
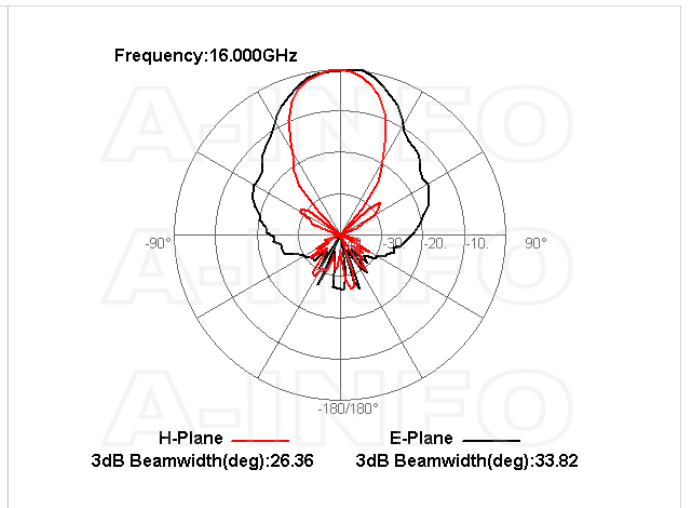
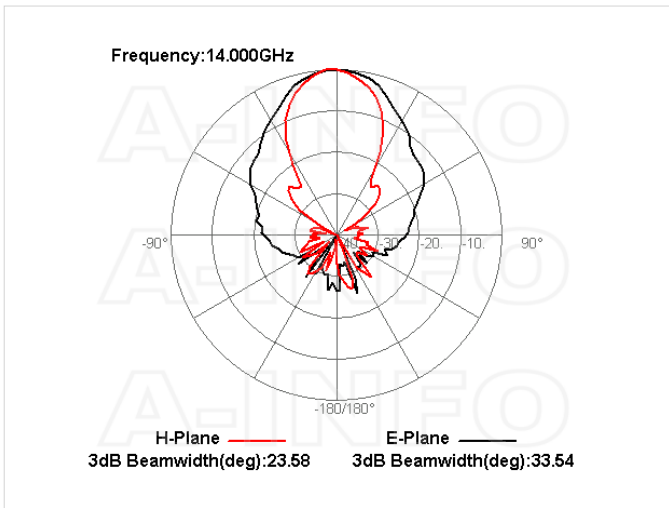


Frequency:10.000GHz



Frequency:12.000GHz





## Related Products



LB-20180-L L Type Mounting Bracket



Tripod\_15Kg Al Alloy Tripod



3033HL Wooden Tripod



3033QM Wooden Tripod Metalfree



Carrying Case\_LB-SJ-20180 AI Alloy Carrying Case



SM-SM-A050-500 Flexible Cable Assembly 500mm DC- 26.5GHz SMA Male to SMA Male



SM-SM-A050-1000 Flexible Cable Assembly 1000mm DC- 26.5GHz SMA Male to SMA Male



SM-SM-A050-1500 Flexible Cable Assembly 1500mm DC- 26.5GHz SMA Male to SMA Male



SM-SM-A050-2000 Flexible Cable Assembly 2000mm DC- 26.5GHz SMA Male to SMA Male



SM-SM-A050-3000 Flexible Cable Assembly 3000mm DC- 26.5GHz SMA Male to SMA Male



SM-SM-A050-5000 Flexible Cable Assembly 5000mm DC- 26.5GHz SMA Male to SMA Male



SM-SM-A050-10000 Flexible Cable Assembly 10000mm DC- 26.5GHz SMA Male to SMA Male



SM-SM-A080-500 Flexible Cable Assembly 500mm DC- 26.5GHz SMA Male to SMA Male



SM-SM-A080-1000 Flexible Cable Assembly 1000mm DC- 26.5GHz SMA Male to SMA Male



SM-SM-A080-1500 Flexible Cable Assembly 1500mm DC- 26.5GHz SMA Male to SMA Male



SM-SM-A080-2000 Flexible Cable Assembly 2000mm DC- 26.5GHz SMA Male to SMA Male



SM-SM-A080-3000 Flexible Cable Assembly 3000mm DC- 26.5GHz SMA Male to SMA Male



SM-SM-A080-5000 Flexible Cable Assembly 5000mm DC- 26.5GHz SMA Male to SMA Male



SM-SM-A080-10000 Flexible Cable Assembly 10000mm DC- 26.5GHz SMA Male to SMA Male



SM-SM-A080-20000 Flexible Cable Assembly 20000mm DC- 26.5GHz SMA Male to SMA Male



SM-SM-A100-500 Flexible Cable Assembly 500mm DC- 18GHz SMA Male to SMA Male



SM-SM-A100-1000 Flexible Cable Assembly 1000mm DC-18GHz SMA Male to SMA Male



SM-SM-A100-1500 Flexible Cable Assembly 1500mm DC- 18GHz SMA Male to SMA Male



SM-SM-A100-2000 Flexible Cable Assembly 2000mm DC- 18GHz SMA Male to SMA Male



SM-SM-A100-3000 Flexible Cable Assembly 3000mm DC- 18GHz SMA Male to SMA Male



SM-SM-A100-5000 Flexible Cable Assembly 5000mm DC- 18GHz SMA Male to SMA Male



SM-SM-A100-10000 Flexible Cable Assembly 10000mm DC- 18GHz SMA Male to SMA Male

## About this Datasheet

<ul style="list-style-type: none"> <li>● <b>Product Information</b> Product Link: <a href="https://www.ainfoinc.com/lb-sj-40180-sf-broadband-dual-polarization-horn-antenna-4-18-ghz-14db-gain-sma-female">https://www.ainfoinc.com/lb-sj-40180-sf-broadband-dual-polarization-horn-antenna-4-18-ghz-14db-gain-sma-female</a> Data subject to change without notice. © A-INFO INC. 2024. All Rights Reserved</li> </ul>	<ul style="list-style-type: none"> <li>● <b>Contact Us</b> Address: 60 Tesla, Irvine, CA 92618, USA Website: <a href="http://www.ainfoinc.com">www.ainfoinc.com</a> Email: <a href="mailto:sales@ainfoinc.com">sales@ainfoinc.com</a></li> </ul>	<ul style="list-style-type: none"> <li>● <b>Phone &amp; Fax</b> Phone: +1-949-639-9688 +1-949-639-9608 Fax: +1-949-639-9670</li> </ul>
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