



LB-SJ-20180-SF Broadband Dual Polarization Horn Antenna 2-18GHz  
14dB Gain SMA Female

Broadband Dual Polarization Horn Antenna Operating From 2GHz to  
18GHz With a Nominal 14dB Gain With SMA Female Connector

### Product Information

SKU	LB-SJ-20180-SF
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### Description

Broadband Dual Polarization Horn Antenna LB-SJ-20180-SF, operating from 2 to 18GHz with a nominal 14dB gain and low VSWR 1.5:1 with SMA Female output connector. The model LB-SJ-20180-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

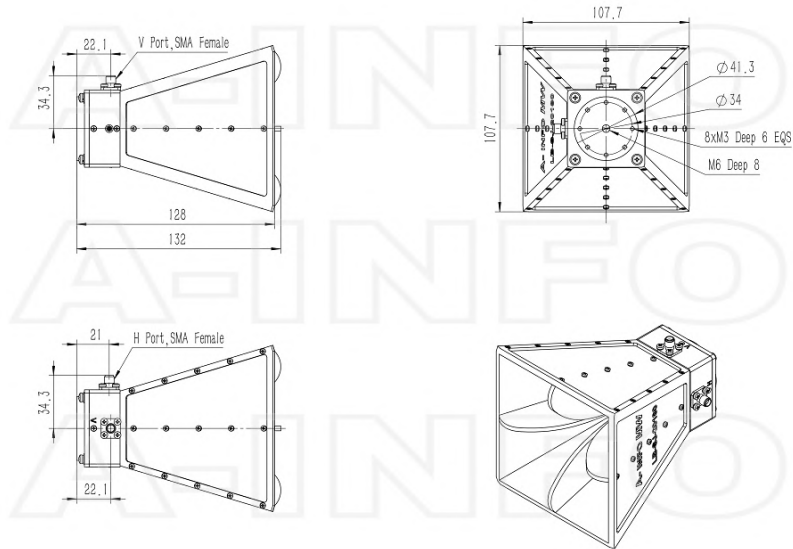
Electrical Specification		Interface	
Frequency, Min (GHz)	2	Output Type	Coaxial
Frequency, Max (GHz)	18	Connector	SMA
Gain, Typ (dBi)	14	Connector Gender	Female
Polarization	Dual Linear	Mechanical Specification	
3dB Beamwidth, E-Plane, Min (Deg.)	24	Body Material	Al
3dB Beamwidth, E-Plane, Max (Deg.)	79	Finish	Chemical Conversion Coating
3dB Beamwidth, H-Plane, Min (Deg.)	19	Size, W (mm)	107.7
3dB Beamwidth, H-Plane, Max (Deg.)	79	Size, H (mm)	107.7
Cross Pol. Isolation, Min (dB)	20	Size, L (mm)	132
Cross Pol. Isolation, Typ (dB)	30	Weight, (kg)	0.45
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		

## Additional Information

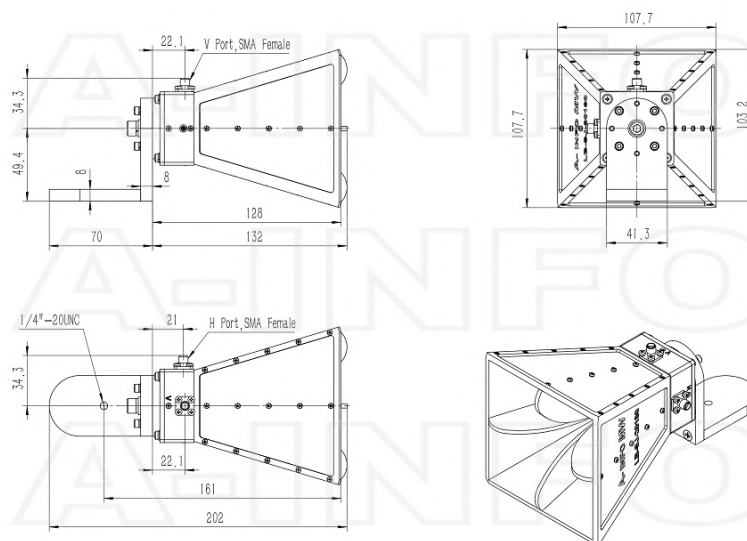
Application	General Purpose Indoor & Outdoor, Fixed	Solution for	Antenna Measurement Reflector Feed Far-field Measurement Planar Near-Field Measurement Cylindrical Near-Field Measurement Spherical Near-Field Measurement CATR System Intergration
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##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

SMA-Female Output (P/N: LB-SJ-20180-SF)

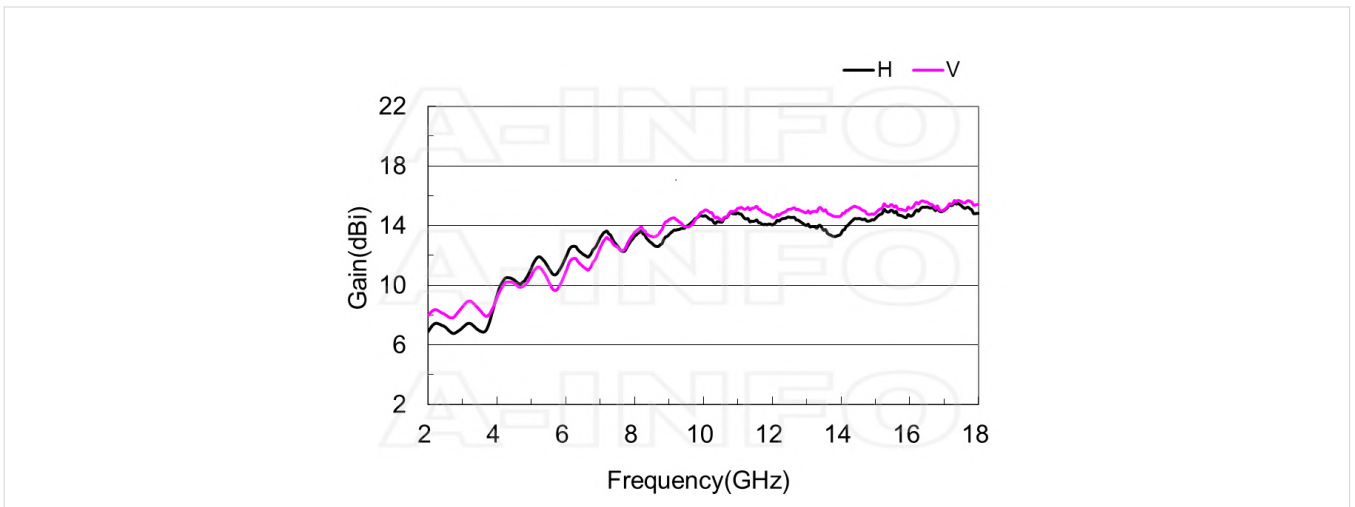


SMA-Female Output with L Type Mounting Bracket (Option, P/N: LB-20180-L)

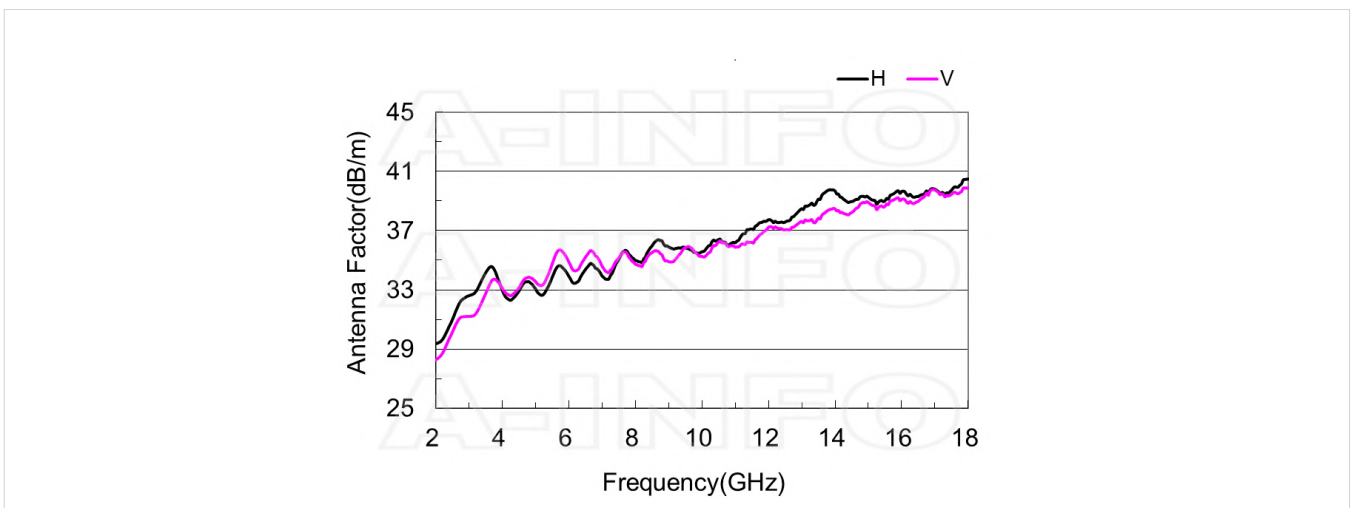


## Typical Test Results

### Gain



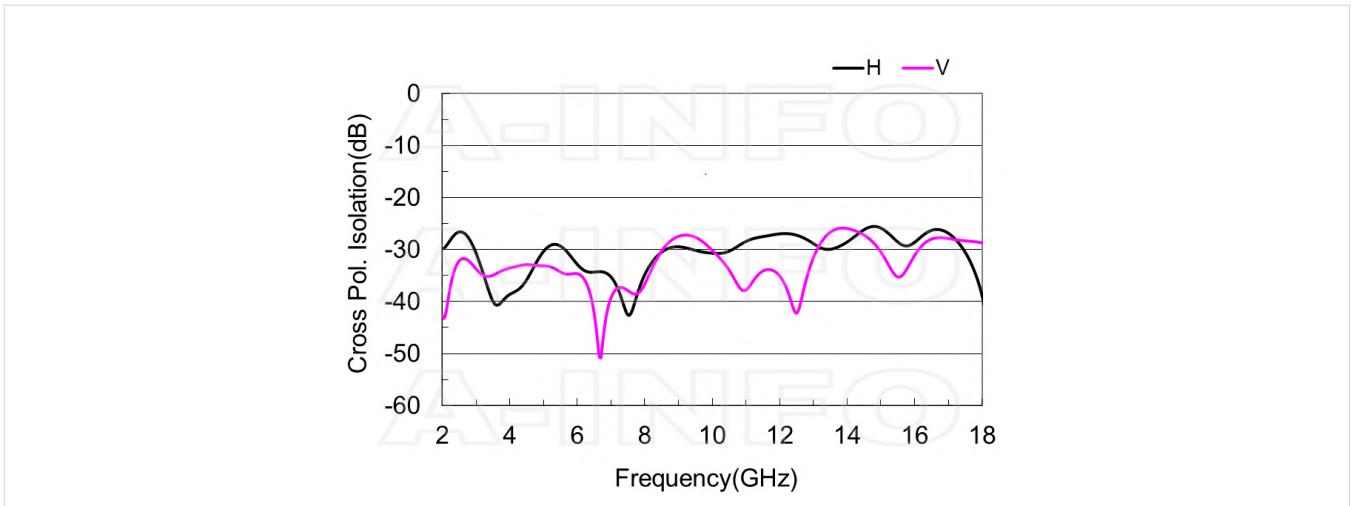
### Antenna Factor



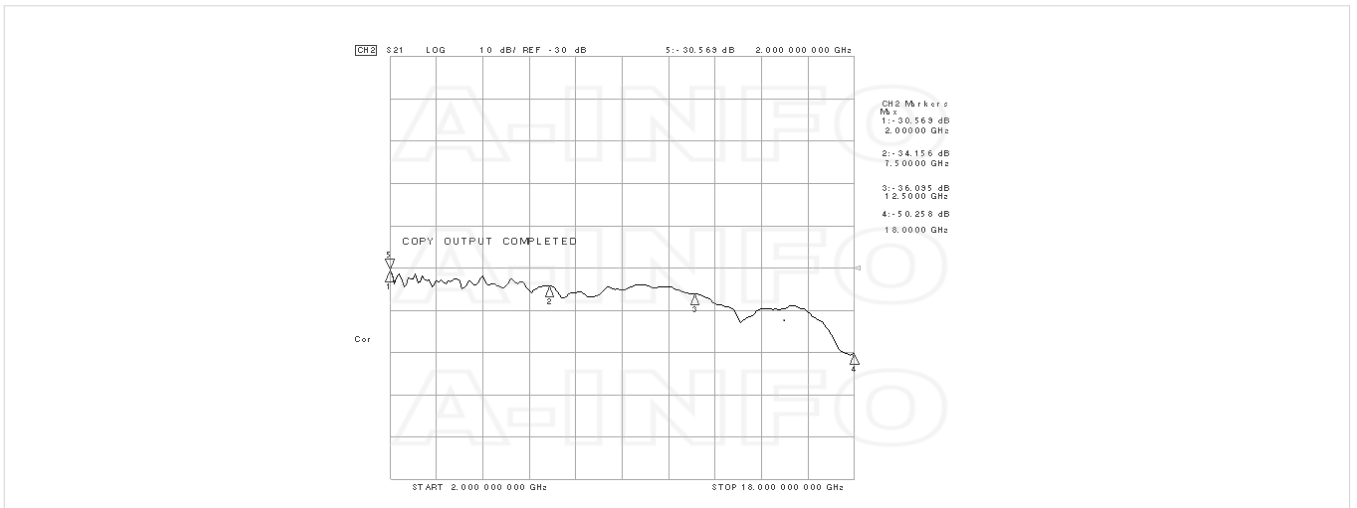
### Antenna Factor (Table)

Frequency(GHz)	Horizontal		Vertical	
	Gain(dBi)	AF(dB/m)	Gain(dBi)	AF(dB/m)
2.0	6.87	29.36	7.97	28.26
3.0	7.15	32.60	8.55	31.20
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

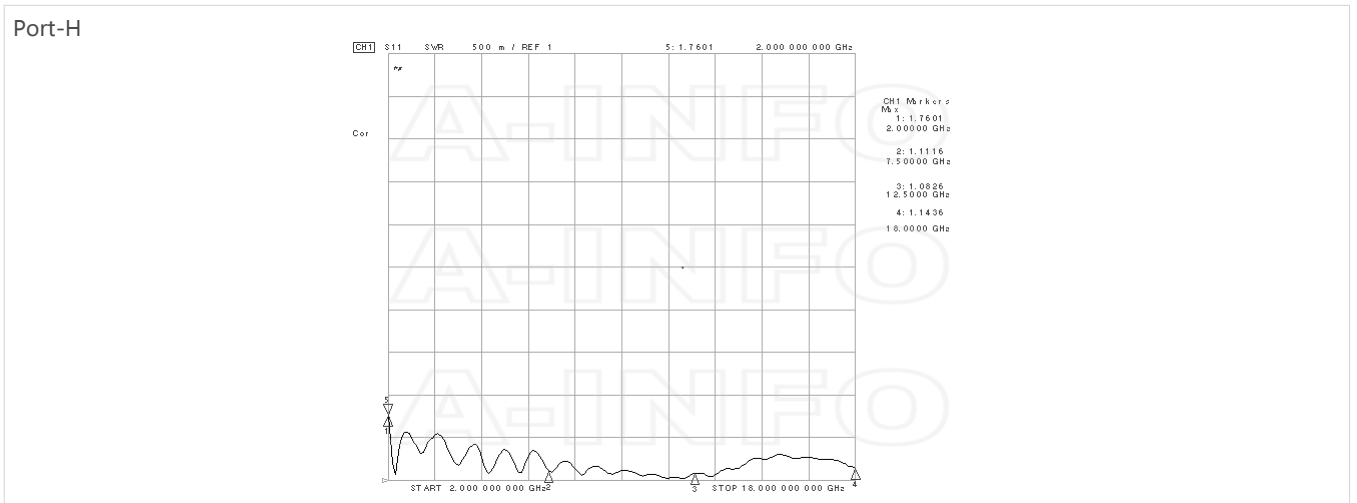


## Port to Port Isolation

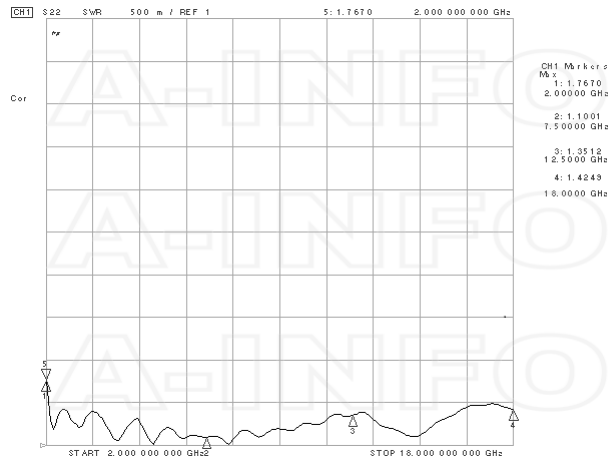


## VSWR

### Port-H

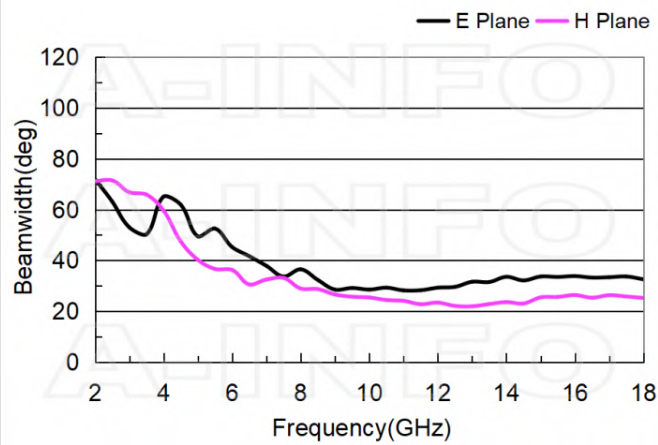


Port-V

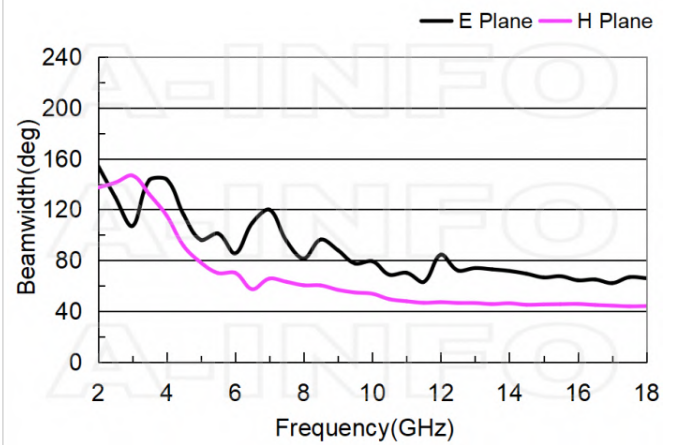


## Beamwidth

3dB Beamwidth

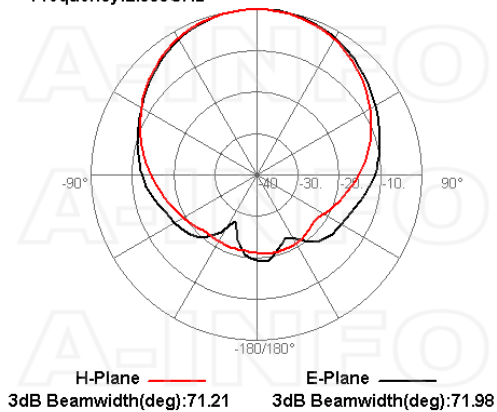


10dB Beamwidth

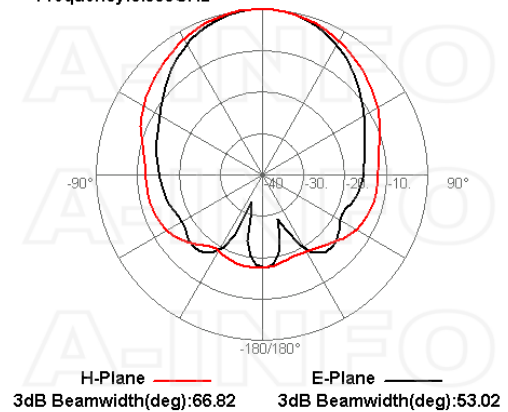


## Pattern 1

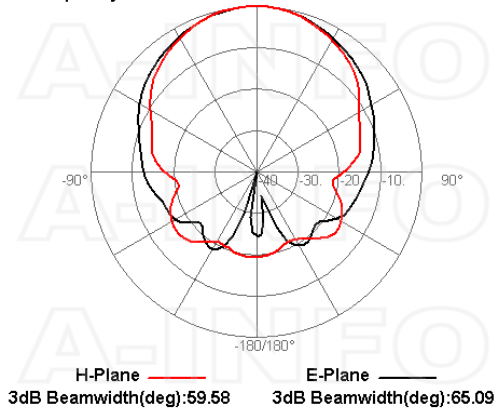
Frequency:2.000GHz



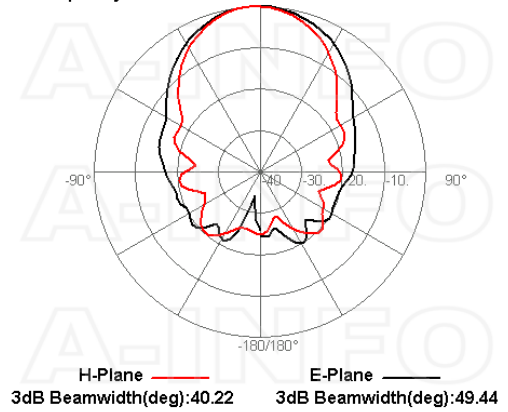
Frequency:3.000GHz



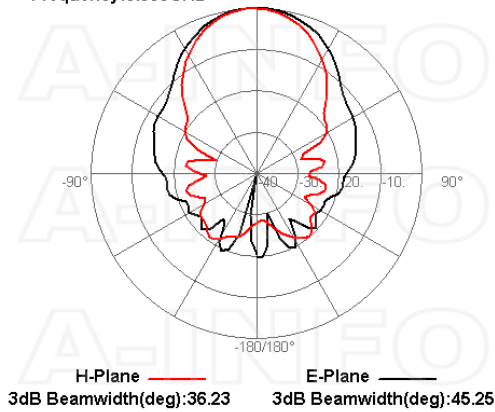
Frequency:4.000GHz



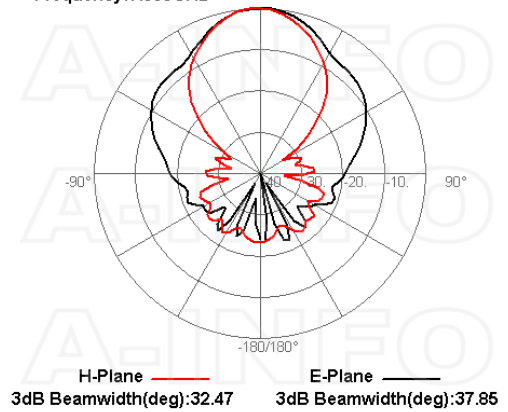
Frequency:5.000GHz



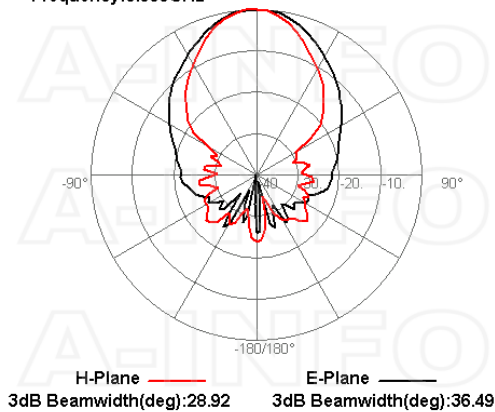
Frequency:6.000GHz



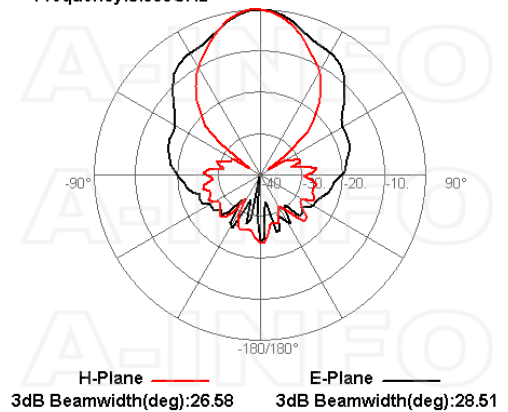
Frequency:7.000GHz



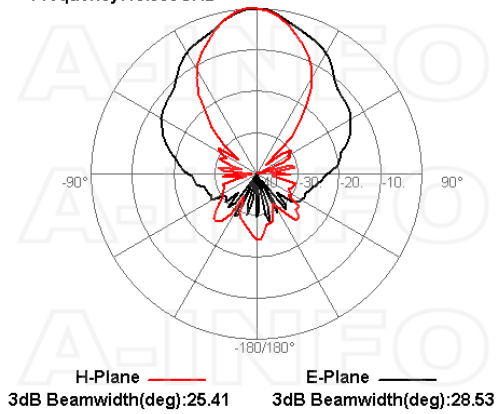
Frequency:8.000GHz



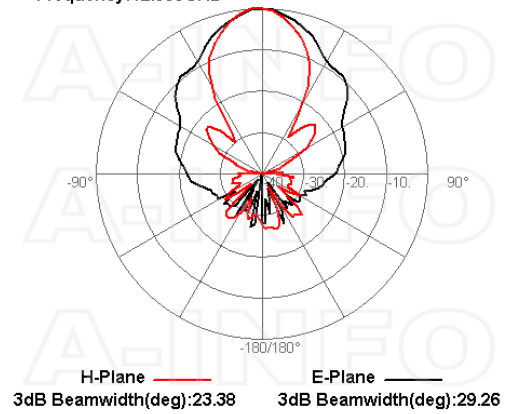
Frequency:9.000GHz



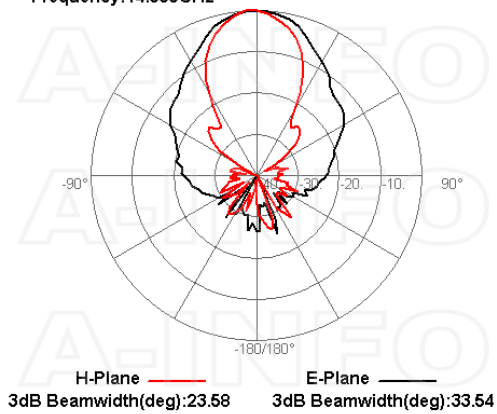
Frequency:10.000GHz



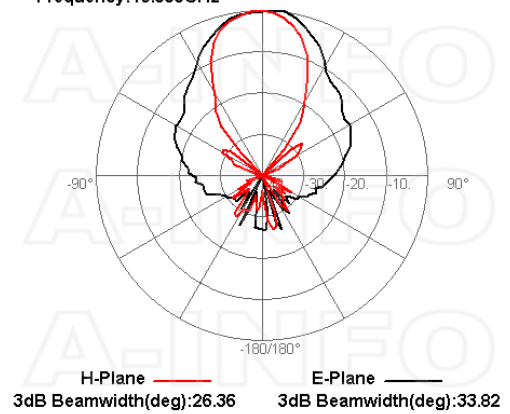
Frequency:12.000GHz



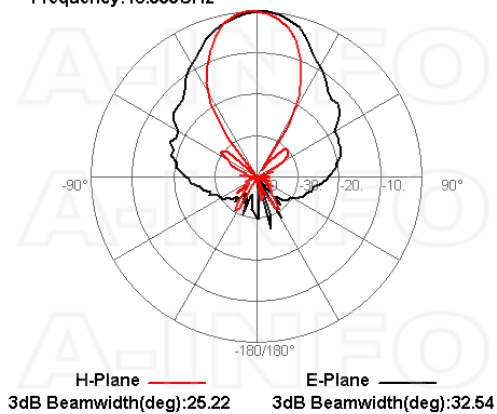
Frequency:14.000GHz



Frequency:16.000GHz



Frequency:18.000GHz



## 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 Al 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



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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-20180-sf-broadband-dual-polarization-horn-antenna-2-18-ghz-14db-gain-sma-female">https://www.ainfoinc.com/lb-sj-20180-sf-broadband-dual-polarization-horn-antenna-2-18-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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