

LB-SJ-180540BL-2.4F Broadband Dual Polarization Horn Antenna  
18-54GHz 8dB Gain 2.4mm Female



Broadband Dual Polarization Horn Antenna Operating From 18GHz to 54GHz With a Nominal 8dB Gain With 2.4mm Female Connector

### Product Information

SKU	LB-SJ-180540BL-2.4F	Patents	US D1006799 (USA)
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### Description

Broadband Dual Polarization Horn Antenna LB-SJ-180540BL-2.4F, operating from 18 to 54GHz with a nominal 8dB gain and 2.4mm Female output connector. The model LB-SJ-180540BL-2.4F has uniform gain through its frequency span, providing efficient performance characteristics and directionality. It can handle 10W continuously and 20W 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

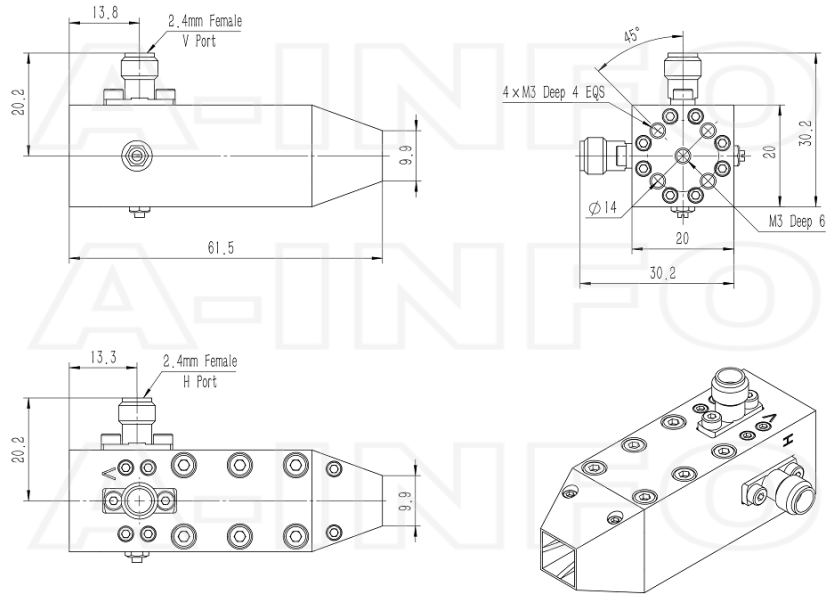
Electrical Specification		Interface	
Frequency, Min (GHz)	18	Output Type	Coaxial
Frequency, Max (GHz)	54	Connector	2.4mm
Gain, Typ (dBi)	8	Connector Gender	Female
Polarization	Dual Linear	Mechanical Specification	
3dB Beamwidth, E-Plane, Min (Deg.)	29	Body Material	Al
3dB Beamwidth, E-Plane, Max (Deg.)	85	Finish	Gold Plated, Gray Paint
3dB Beamwidth, H-Plane, Min (Deg.)	34	Size, W (mm)	30.2
3dB Beamwidth, H-Plane, Max (Deg.)	76	Size, H (mm)	30.2
Cross Pol. Isolation, Min (dB)	20	Size, L (mm)	61.5
Cross Pol. Isolation, Typ (dB)	30	Weight, (kg)	0.08
Port to Port Isolation, Min (dB)	25		
Port to Port Isolation, Typ (dB)	35		
VSWR, Typ	2.0:1		
Impedance, (Ohm)	50		
Power Handling, CW, (W)	10		
Power Handling, Peak, (W)	20		

## Additional Information

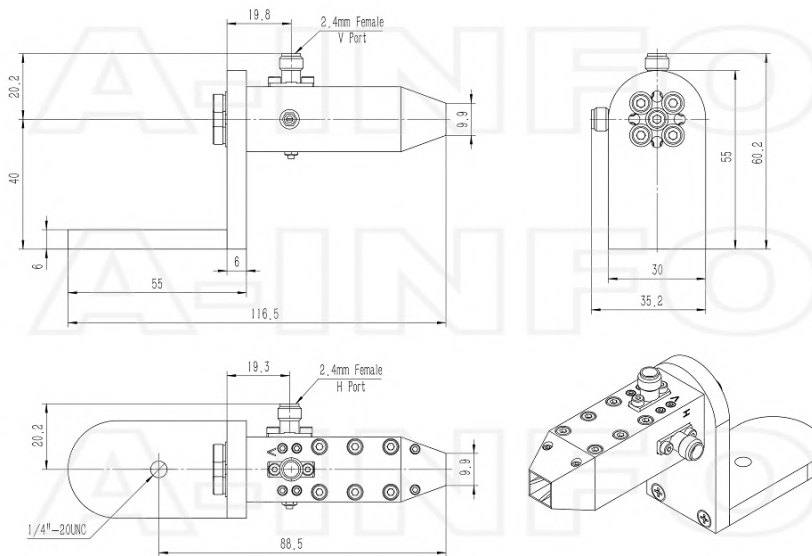
Solution for	Antenna Measurement Reflector Feed Far-field Measurement Planar Near-Field Measurement Cylindrical Near-Field Measurement Spherical Near-Field Measurement CATR System Intergration
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## Outline Drawing

2.4mm-Female Output (P/N: LB-SJ-180540BL-2.4F)

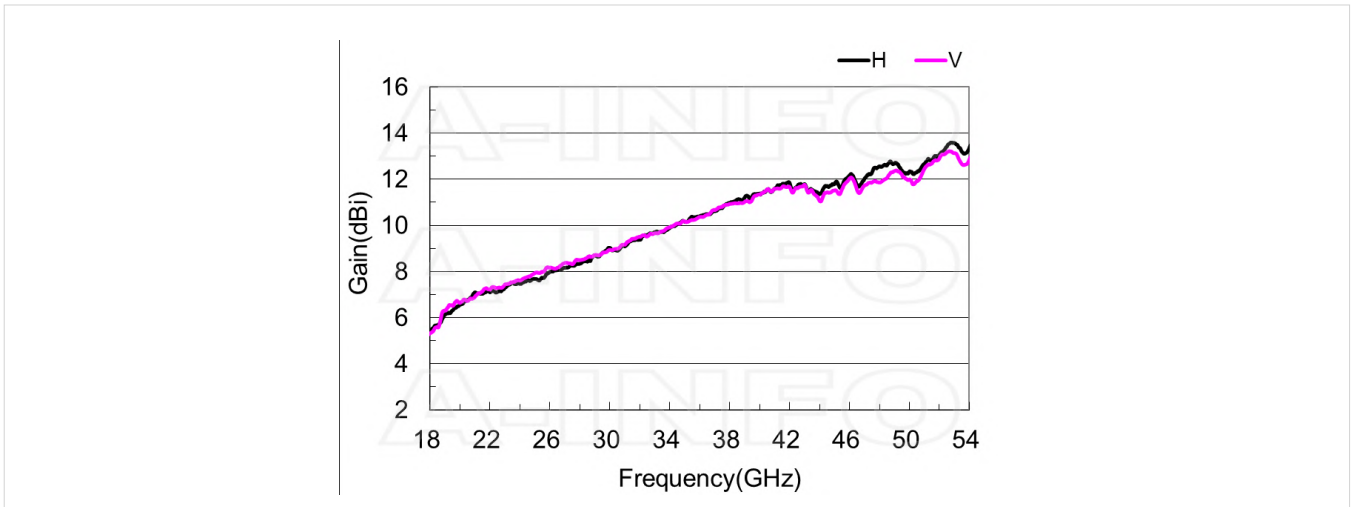


2.4mm-Female Output with L Type Mounting Bracket (Option, P/N: LB-SJ-180400-L)

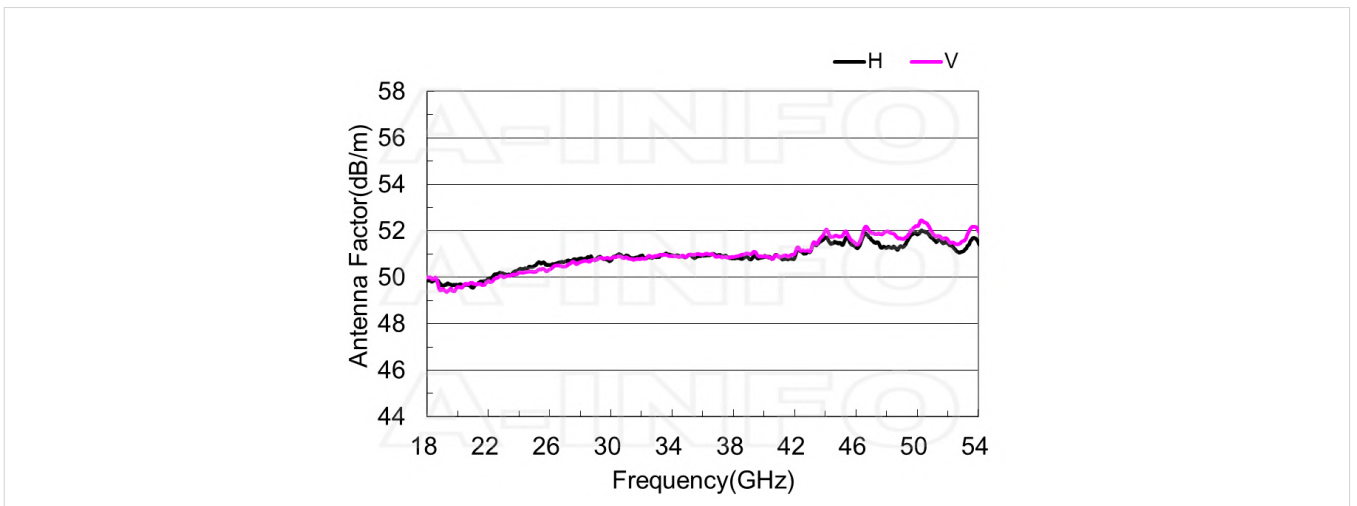


## Typical Test Results

### Gain



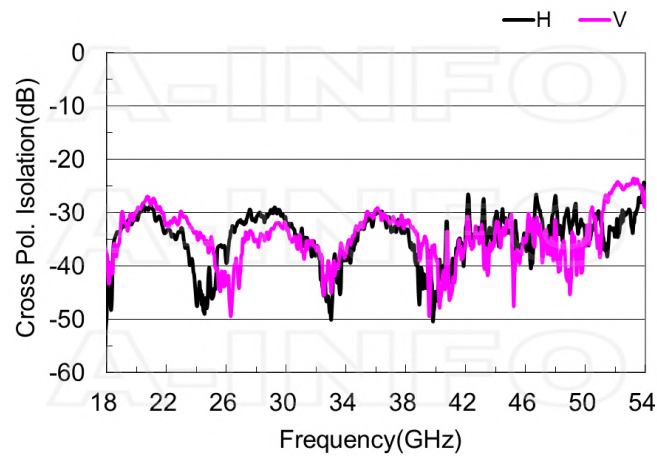
### Antenna Factor



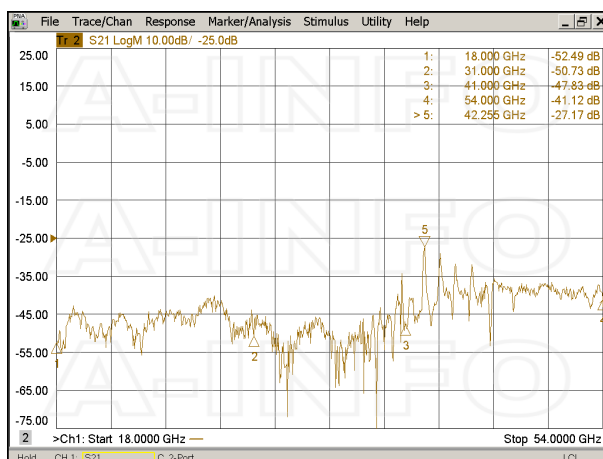
### Antenna Factor (Table)

Frequency(GHz)	Horizontal		Vertical	
	Gain(dBi)	AF(dB/m)	Gain(dBi)	AF(dB/m)
18.0	5.44	49.88	5.32	49.99
20.0	6.56	49.68	6.64	49.59
22.0	7.10	49.96	7.22	49.84
24.0	7.47	50.34	7.61	50.20
26.0	7.98	50.53	8.17	50.33
28.0	8.35	50.80	8.50	50.65
30.0	9.03	50.72	8.94	50.81
32.0	9.39	50.93	9.51	50.80
34.0	9.89	50.95	9.93	50.91
36.0	10.39	50.94	10.37	50.97
38.0	10.98	50.83	10.93	50.87
40.0	11.38	50.87	11.35	50.90
42.0	11.84	50.83	11.67	51.01
44.0	11.35	51.73	11.06	52.01
46.0	12.17	51.29	12.04	51.42
48.0	12.56	51.27	11.87	51.97
50.0	12.34	51.84	11.99	52.20
52.0	13.07	51.46	12.91	51.62
54.0	13.37	51.49	12.86	52.00

### Cross Polarization Isolation

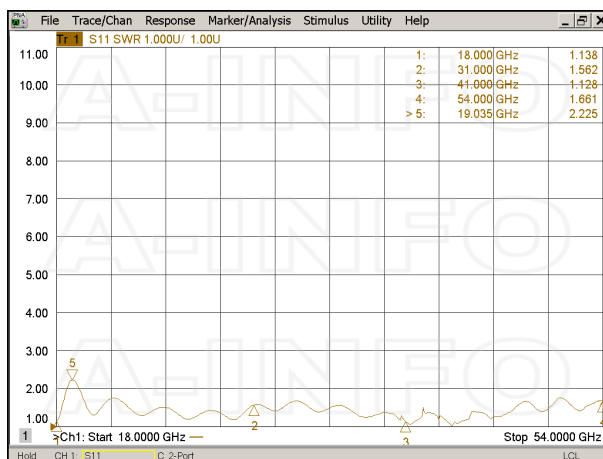


### Port to Port Isolation

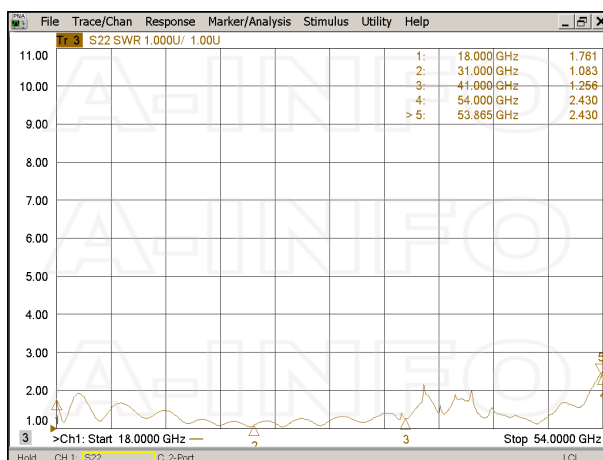


### VSWR

#### Port-H

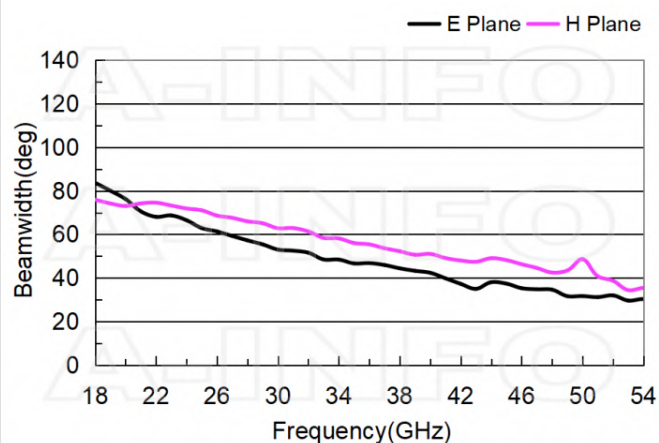


#### Port-V

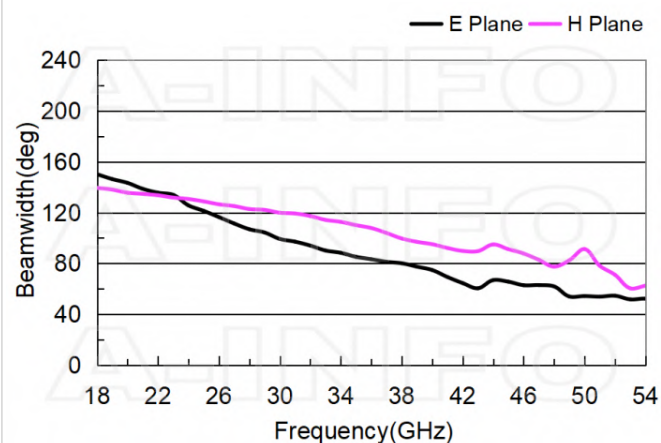


## Beamwidth

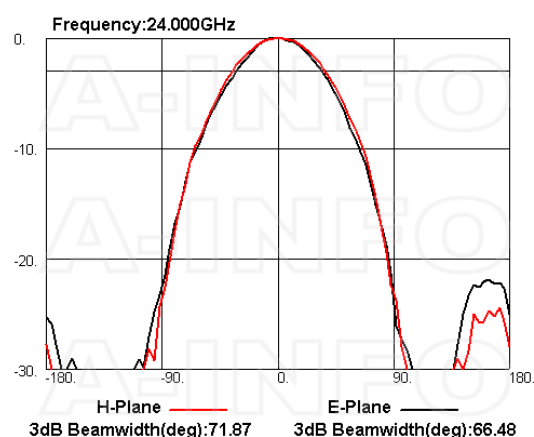
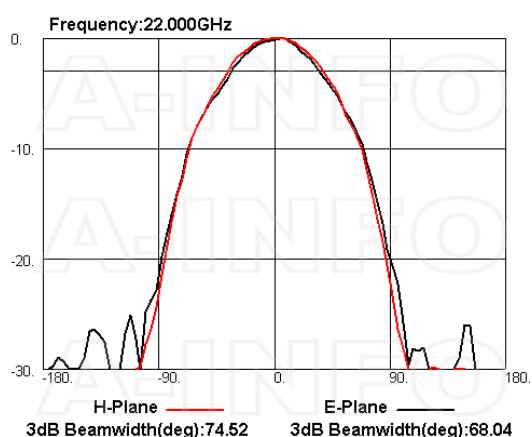
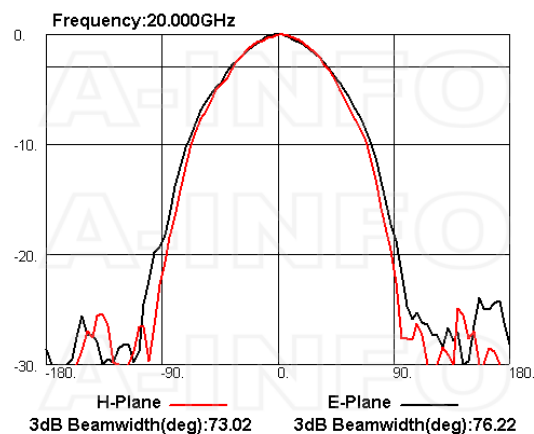
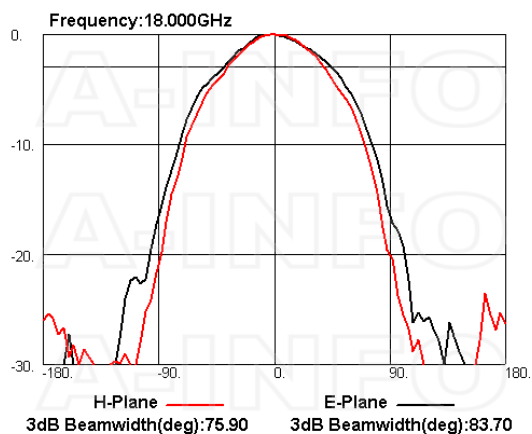
3dB Beamwidth

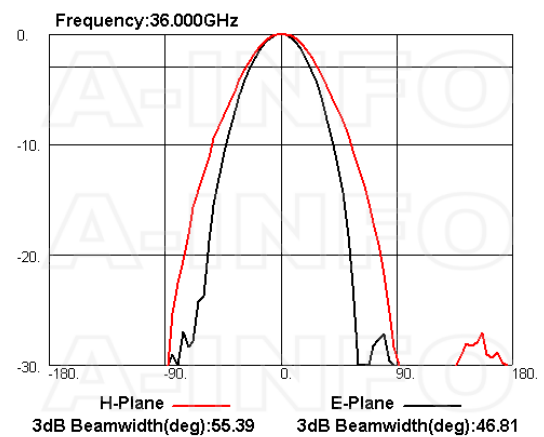
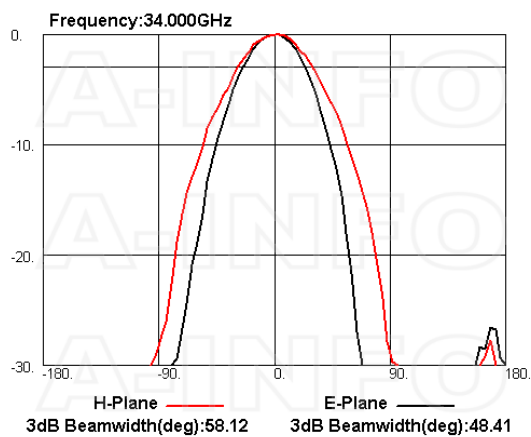
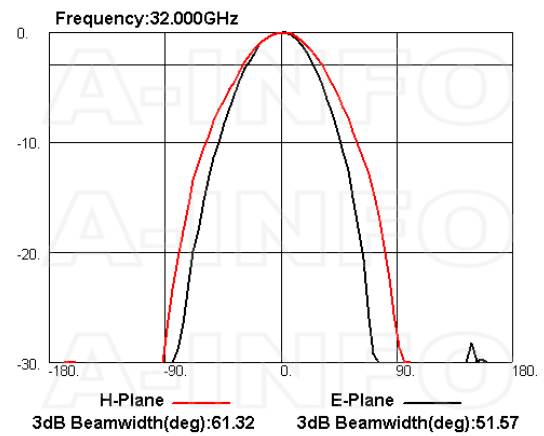
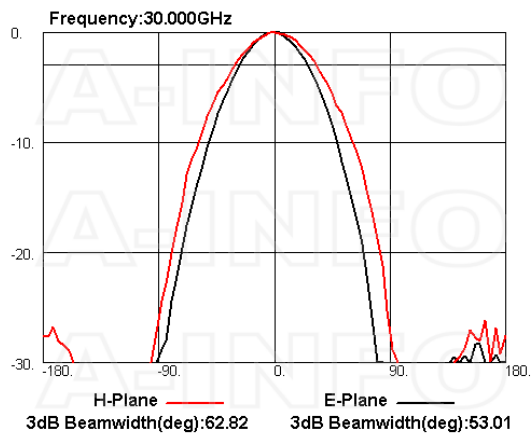
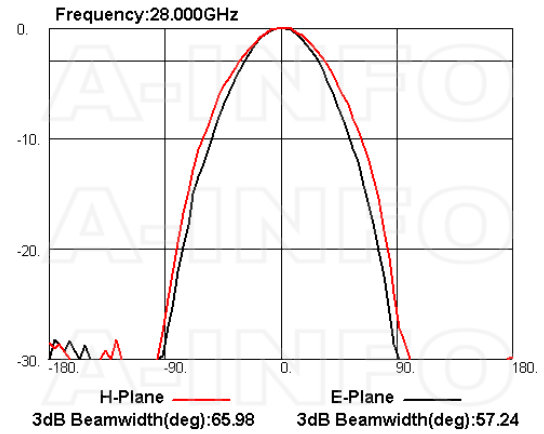
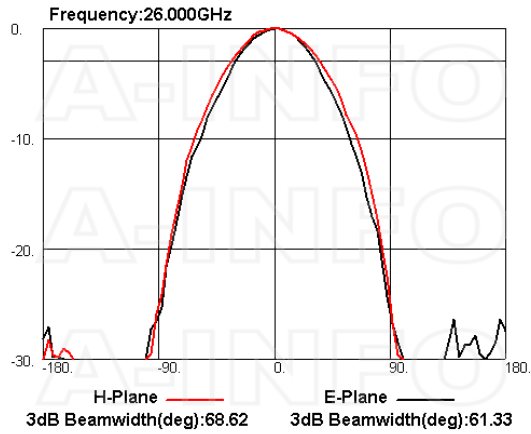


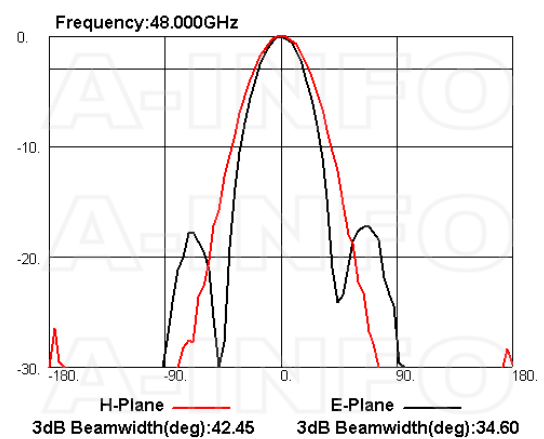
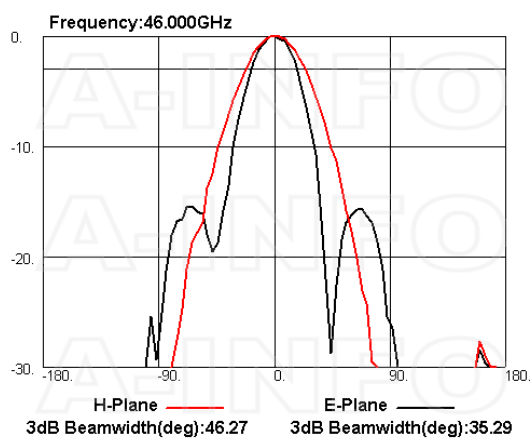
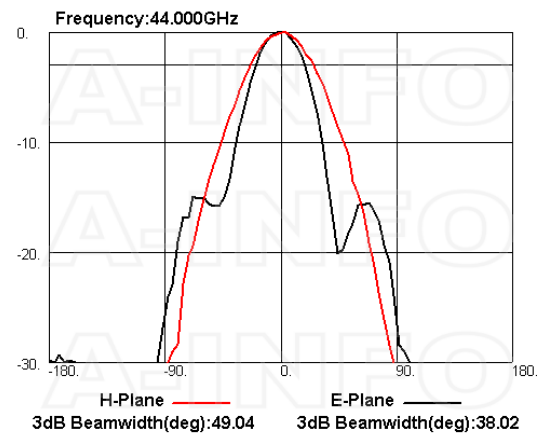
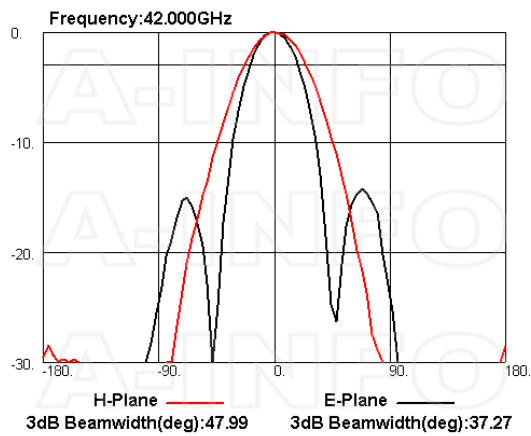
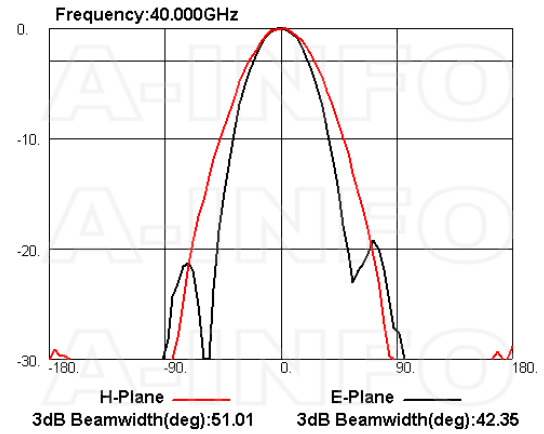
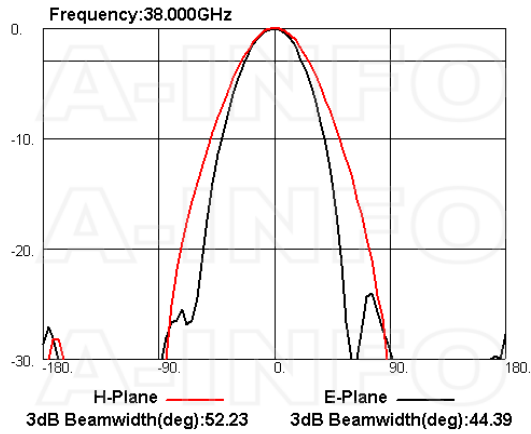
10dB Beamwidth

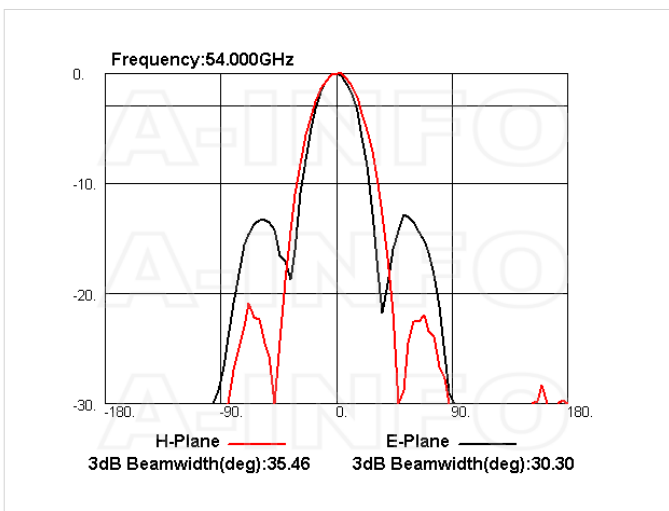
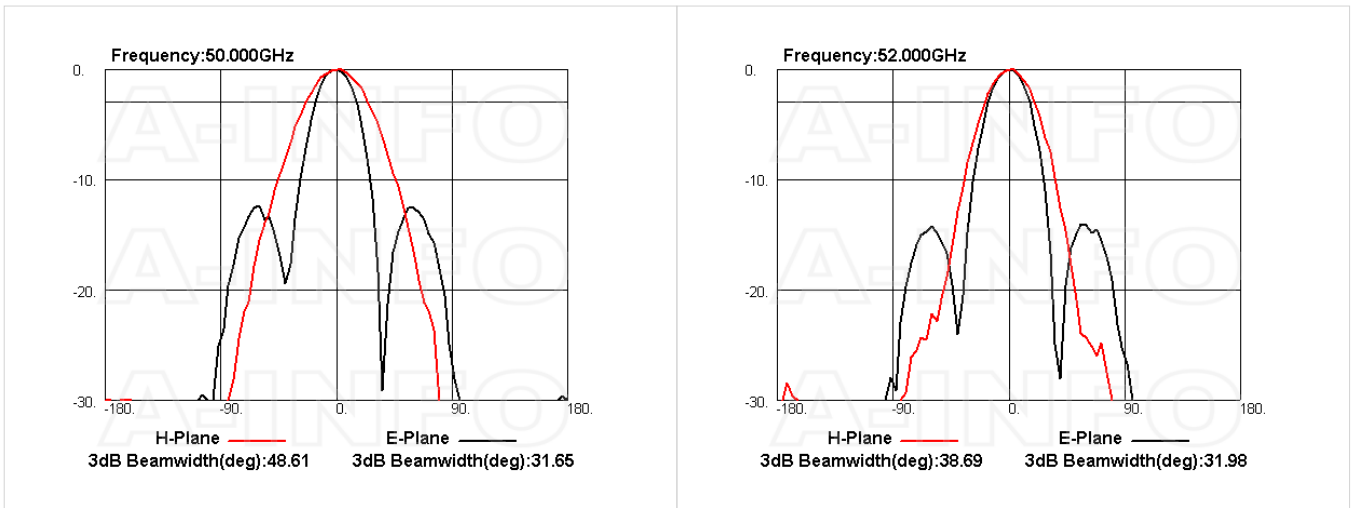


## Pattern 1









## Related Products



LB-SJ-180400-L L Type Mounting Bracket



Tripod\_15Kg Al Alloy Tripod



3033HL Wooden Tripod



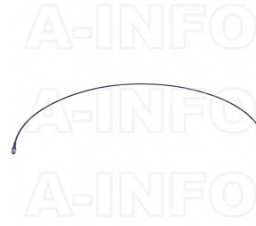
3033QM Wooden Tripod Metalfree



Carrying Case\_LB-SJ-180500L AI Alloy Carrying Case



2.4M-2.4M-B020-500 Flexible Cable Assembly 500mm DC-50GHz 2.4mm Male to 2.4mm Male



2.4M-2.4M-B020-1000 Flexible Cable Assembly 1000mm DC-50GHz 2.4mm Male to 2.4mm Male



2.4M-2.4M-B020-1500 Flexible Cable Assembly 1500mm DC-50GHz 2.4mm Male to 2.4mm Male



2.4M-2.4M-B020-2000 Flexible Cable Assembly 2000mm DC-50GHz 2.4mm Male to 2.4mm Male



2.4M-2.4M-B020-3000 Flexible Cable Assembly 3000mm DC-50GHz 2.4mm Male to 2.4mm Male



2.4M-2.4M-B020-5000 Flexible Cable Assembly 5000mm DC-50GHz 2.4mm Male to 2.4mm Male



2.4M-2.4M-B020-10000 Flexible Cable Assembly 10000mm DC-50GHz 2.4mm Male to 2.4mm Male



2.4M-2.4F-B020S-500 Flexible Cable Assembly 500mm DC-50GHz 2.4mm Male to 2.4mm Female



2.4M-2.4F-B020S-1000 Flexible Cable Assembly 1000mm DC-50GHz 2.4mm Male to 2.4mm Female



2.4M-2.4F-B020S-1500 Flexible Cable Assembly 1500mm DC-50GHz 2.4mm Male to 2.4mm Female



2.4M-2.4F-B020S-2000 Flexible Cable Assembly 2000mm DC-50GHz 2.4mm Male to 2.4mm Female



2.4M-2.4F-B020S-3000 Flexible Cable Assembly 3000mm DC-50GHz 2.4mm Male to 2.4mm Female



2.4M-2.4F-B020S-5000 Flexible Cable Assembly 5000mm DC-50GHz 2.4mm Male to 2.4mm Female



2.4M-2.4F-B020S-10000 Flexible Cable Assembly 10000mm DC-50GHz 2.4mm Male to 2.4mm Female

### About this Datasheet

<ul style="list-style-type: none"> <li>● <b>Product Information</b></li> </ul> <p>Product Link:  <a href="https://www.ainfoinc.com/lb-sj-180540bl-2-4f-broadband-dua-l-polarization-horn-antenna-18-54-ghz-8db-gain-2-4mm-female">https://www.ainfoinc.com/lb-sj-180540bl-2-4f-broadband-dua-l-polarization-horn-antenna-18-54-ghz-8db-gain-2-4mm-female</a></p> <p>Data subject to change without notice.          © A-INFO INC. 2024. All Rights Reserved</p>	<ul style="list-style-type: none"> <li>● <b>Contact Us</b></li> </ul> <p>Address:          60 Tesla, Irvine, CA 92618, USA</p> <p>Website:  <a href="http://www.ainfoinc.com">www.ainfoinc.com</a></p> <p>Email:  <a href="mailto:sales@ainfoinc.com">sales@ainfoinc.com</a></p>	<ul style="list-style-type: none"> <li>● <b>Phone &amp; Fax</b></li> </ul> <p>Phone:          +1-949-639-9688          +1-949-639-9608</p> <p>Fax:          +1-949-639-9670</p>
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