

## TF-2A4JZ31-F2A Data Sheet v0.2

FDD:XXXXXX Pol,694-960/694-960/1695-2690/1695-2690/1695-2690/1695-2690MHz

TDD:XXXX Pol,3300-3800MHz

FDD:65/65/65/65/65/65 Horizontal beamwidth,16/16/17/17/17/17dBi

TDD:65 Horizontal beamwidth,17dBi

E-Tilt,FDD:2-12/2-12/2-12/2-12/2-12/2-12;TDD:2-12

2.0m 20-Port 2L4M+TDD Antenna with Integrated RCU

## Electrical Properties(BASTA 11.1)

General Parameter	Frequency Band(MHz)	3300-3800(P1)		
		3300-3600	3600-3800	
	Polarization(°)	±45		
	Electrical Downtilt (°)	2~12		
	Impedance (Ω)	50		
Calibration and Electrical Parameters	Amplitude Coupling (dB)	-26±2		
	Coupled Amplitude Variation (dB)	1		
	Coupled Phase Variation (°)	9		
	VSWR	< 1.5		
	Co-Polarization Isolation Ports(dB)	≥20(2-6°);≥25(7-12°)		
	Cross-Polarization Isolation Ports(dB)	≥20(2-6°);≥25(7-12°)		
	Input Power, Average (W)	80		
Radiation parameters	Single column Beam	Gain (dBi)	15.7±0.5	16±0.5
		Horizontal 3dB Beamwidth (°)	70±15	65±15
		Vertical 3dB Beam Width(°)	6.2±0.4	5.8±0.4
		Cross Polar Ratio at 0° (dB)	15	15
		Cross Polar Ratio Sector ±60° (dB)	6	6
		Front to Back Ratio at 180±30° (dB)	22	22
		±32.5°Sector Power Ratio(%)	72±7	72±7
		±60°Sector Power Ratio(%)	>90	>90
		Gain (dBi)	17.2±0.5	17.5±0.5
		Vertical 3dB Beamwidth (°)	6.2±0.4	5.8±0.4
		Front to Back Ratio at 180±30°(dB)	22	22
		Upper Sidelobe Suppression (dB)	15	15
		Service Beam	0° Service Beam Gain Over All Tilts(dBi)	21±0.5
	0° Service Beam Horizontal 3dB Beamwidth(°)		25±3	23±3
	0° Service Beam Sidelobe Suppression(dB)		10	10
	0° Service Beam Cross Polar Ratio at 0°(dB)		18	18
	0° Service Beam Front to Back Ratio at 180±30°(dB)		25	25
	±30° Service Beam Gain(dBi)		18.5±0.5	18.7±0.5
	±30° Service Beam Horizontal 3dB Beamwidth(°)		34±3	32±3
	±30° Service Beam Sidelobe Suppression(dB)		3	3

## Electrical Properties(BASTA 11.1)

Frequency Band(MHz)	694-960(R1,R2)			1695-2690(Y1,Y2,Y3,Y4)			
	694-803	790-894	880-960	1695-1990	1920-2200	2300-2400	2500-2690
Polarization	±45°			±45°			
Gain(dBi)	14.7±0.5	15.2±0.5	15.4±0.5	15.7±0.5	15.8±0.5	16.3±0.5	16.5±0.5
Horizontal 3dB Beam Width(°)	67±3	66±3	67±3	69±6	68±5	65±4	60±5
Vertical 3dB Beam Width(°)	10.6±0.8	10.0±0.7	8.6±0.5	10.6±0.7	9.5±0.6	8.3±0.5	7.5±0.5
Front to Back Ratio at 180±30°(dB)	25	25	25	25	25	25	25
Cross Polar Ratio at 0°(dB)	18	18	18	17	17	17	17
Cross Polar Ratio Sector ±60°(dB)	10	10	10	8	8	8	8
1st Upper Sidelobe Suppression(dB)	17	17	17	17	17	17	17
Electrical Downtilt(°)	2-12			2-12			
VSWR	< 1.5			< 1.5			
Cross-polar Isolation(dB)	>25			> 25			
Interband Isolation(dB)	R1//R2 > 25;R1,R2//Y1,Y2,Y3,Y4 > 28						
3rd Order PIM(dBc) @2 x 43 dBm	< -150			< -150			
Impedance(Ω)	50			50			
Power Handling(W)	300			250			

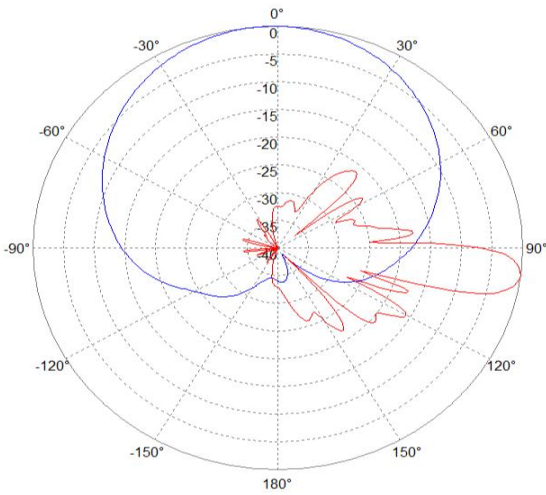
## Mechanical Specifications

Antenna Dimensions (HxWxD) (mm)	1995 x 499 x 199
Packing Dimensions (HxWxD) (mm)	2210 x 569 x 279
Antenna Weight (kg)	35.5
Packed Weight (kg)	45.5
Connector	12 x 4.3-10 Female + MQ4+MQ5
Radome Material	Fiberglass
Wind Load at 150 km/h(N) (Front /Rear/Side)	1273/1354/328
Maximum Wind Speed(km/h)	200
Diameter of Installation Pole(mm)	Φ50-Φ114
Operating Temperature Range(°C)	-40-+65
Lightning Protection	DC Ground
RET Type	Integrated RCU
RET Protocols	AISG 2.0/3GPP

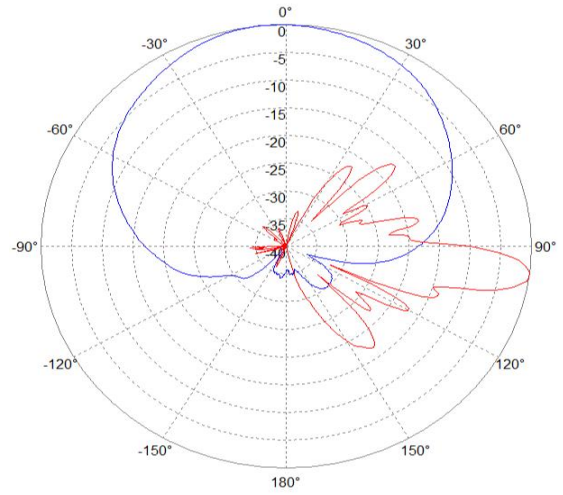


Pattern sample for reference

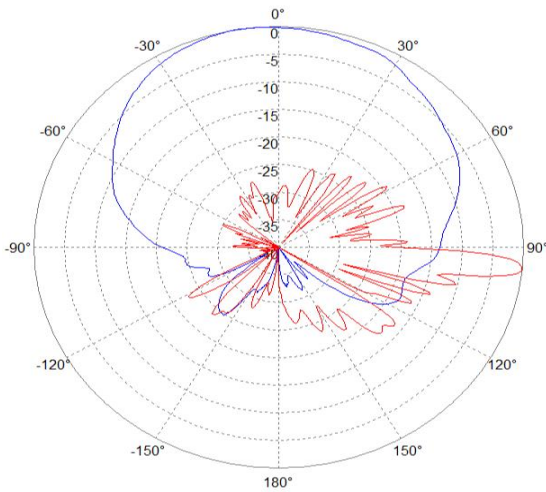
694-960MHz



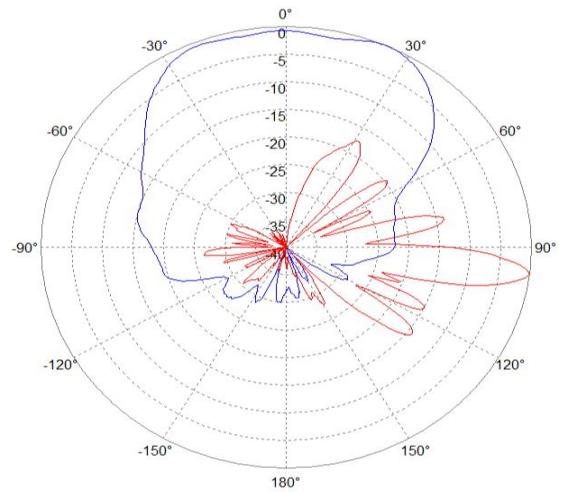
1695-26900MHz



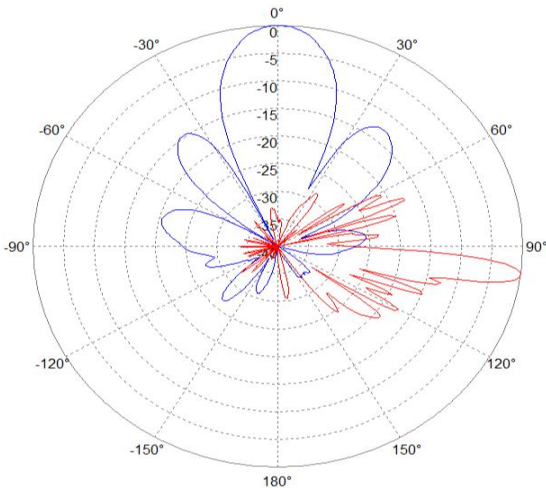
3300-3800Mhz Single Column Beam



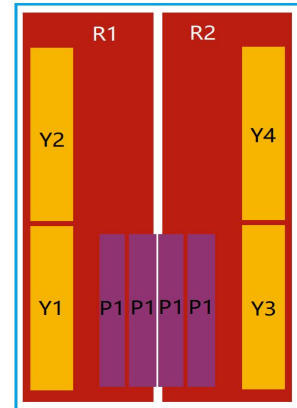
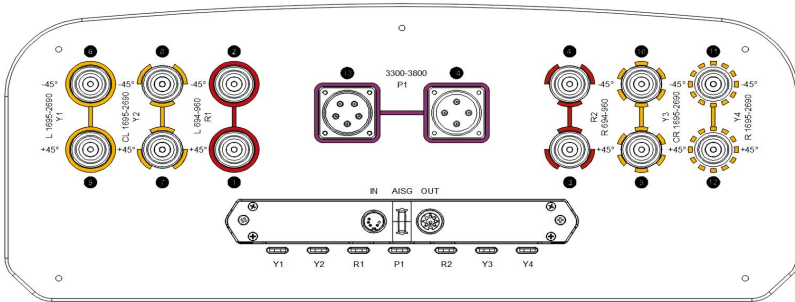
3300-3800Mhz BroadCast Beam



3300-3800Mhz 0° Service Beam



Layout of interface



Array ID	RF Connector	RET (S RET)	Frequency (MHz)	AISG RET UID
R1	1-2	3	694-960	MKxxxxxxxxxxxxxxxxR1
R2	3-4	5	694-960	MKxxxxxxxxxxxxxxxxR2
Y1	5-6	1	1695-2690	MKxxxxxxxxxxxxxxxxY1
Y2	7-8	2	1695-2690	MKxxxxxxxxxxxxxxxxY2
Y3	9-10	6	1695-2690	MKxxxxxxxxxxxxxxxxY3
Y4	11-12	7	1695-2690	MKxxxxxxxxxxxxxxxxY4
P1	13-14	4	3300-3800	MKxxxxxxxxxxxxxxxxP1

\* For more information, please refer to the specification of RET.

Accessories

Item	Model	Weight	Mechanical Tilt Range	Quantity
Mounting Kit	MJM-022-1101A	5.5kg	0-10°	1