

## TF-2A2K2DD32-F2A Data Sheet v0.1

FDD:XXXXXX Pol,694-960/694-960/1710-2170/1710-2170/2490-2690/2490-2690MHz

TDD:XXXX Pol,2490-2690MHz

FDD:65/65/65/65/65/65 Horizontal beamwidth,15.0/15.0/16.0/16.0/17.0/17.0dBi,TDD:65/16.5dBi

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

2m 21-Port 2L4M+TDD Antenna with Integrated RCU

## Electrical Properties(BASTA 11.1)

General Parameter	Frequency Band(MHz)		2490-2690(Y2)
	Polarization(°)		±45
	Electrical Downtilt (°)		2~12
	Impedance (Ω)		50
Calibration and Electrical Parameters	Amplitude Coupling (dB)		-26±2
	Coupled Amplitude Variation (dB)		0.9
	Coupled Phase Variation (°)		8
	VSWR		< 1.5
	Intraband Isolation (dB)		≥20(2-6°);≥25(7-12°)
	Cross polar Isolation (dB)		≥21(2-6°);≥26(7-12°)
	Input Power, Average (W)		250
Radiation parameters	Single column Beam	Gain (dBi)	16.5±1
		Horizontal 3dB Beamwidth (°)	65±15
		Vertical 3dB Beam Width(°)	5.8±0.5
		Cross Polar Ratio at 0° (dB)	15
		Cross Polar Ratio Sector ±60° (dB)	6
		Front to Back Ratio at 180±30° (dB)	22
	Broadcast Beam	±32.5°Sector Power Ratio(%)	72±7
		±60°Sector Power Ratio(%)	>90
		Gain (dBi)	18±0.5
		Vertical 3dB Beamwidth (°)	5.8±0.5
		Front to Back Ratio at 180±30°(dB)	23
	Service Beam	Upper Sidelobe Suppression (dB)	15
		0° Service Beam Gain Over All Tilts(dBi)	21±0.5
		0° Service Beam Horizontal 3dB Beamwidth(°)	20±2
		0° Service Beam Sidelobe Suppression(dB)	10
		0° Service Beam Cross Polar Ratio at 0°(dB)	18
		0° Service Beam Front to Back Ratio at 180±30°(dB)	25
		±60° Service Beam Gain(dBi)	18±0.5
		±60° Service Beam Horizontal 3dB Beamwidth(°)	22±2
		±60° Service Beam Sidelobe Suppression(dB)	3

## Electrical Properties(BASTA 11.1)

Frequency Band(MHz)	694-960(R1,R2)			1710-2170(B1,B2)		2490-2690(Y1,Y3)
	694-803	790-894	880-960	1710-1990	1920-2170	2490-2690
Polarization	±45°					
Gain(dBi)	15.1±0.5	15.4±0.5	15.8±0.5	15.9±0.5	16.1±0.5	17.0±0.5
Horizontal 3dB Beam Width(°)	69±5	67±5	65±5	67±5	65±5	63±6
Vertical 3dB Beam Width(°)	12.1±0.8	10.6±0.8	9.3±0.7	7.5±0.6	6.9±0.6	5.5±0.6
Front to Back Ratio at 180±30°(dB)	23			24		
Cross Polar Ratio at 0°(dB)	18			18		
Cross Polar Ratio Sector ±60°(dB)	8			8		
1st Upper Sidelobe Suppression(dB)	15			15		
Electrical Downtilt(°)	2-12			2-12		
VSWR	< 1.5					
Cross-polar Isolation(dB)	> 25			> 25		
Interband Isolation(dB)	R1//R2 > 25;B1,B2//Y1,Y2 > 25;R1,R2//B1,B2,Y1,Y2 > 28					
3rd Order PIM(dBc) @2 x 43 dBm	< -153					
Impedance(Ω)	50					
Power Handling(W)	300			200		

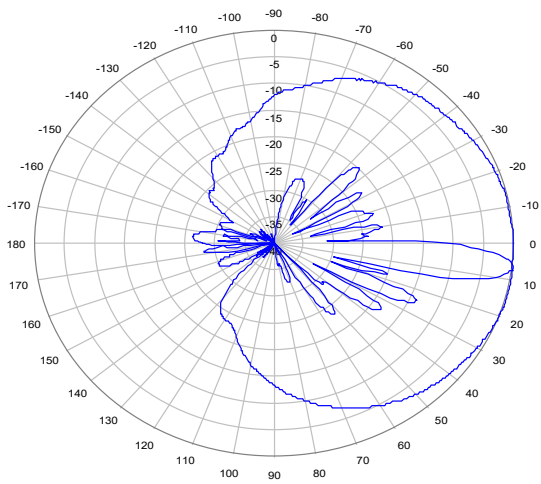
## Mechanical Specifications

Antenna Dimensions (HxWxD) (mm)	1995 x 499 x 199
Packing Dimensions (HxWxD) (mm)	2210 x 569 x 279
Antenna Weight (kg)	37.2
Packed Weight (kg)	47.4
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)	241
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

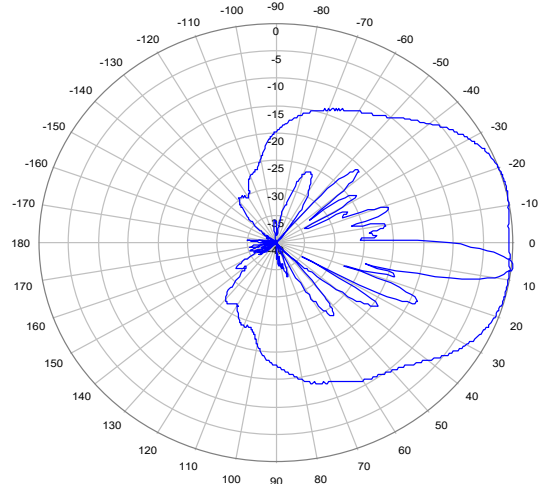


Pattern sample for reference

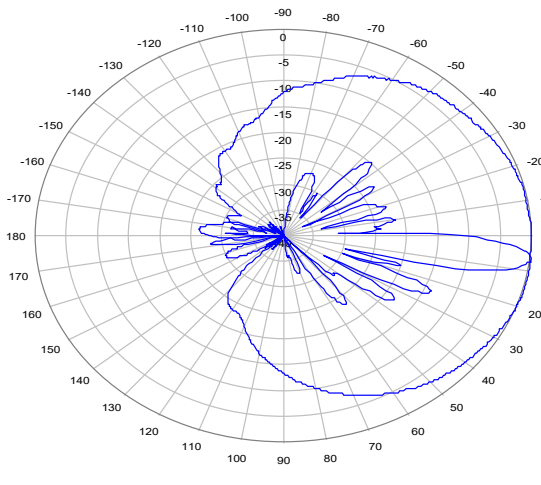
694-960MHz



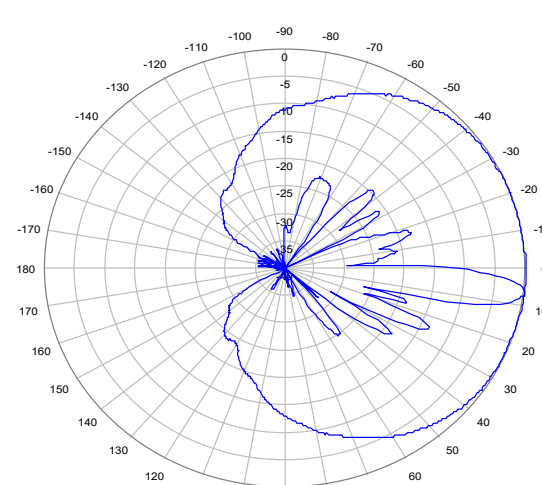
1710-2170MHz



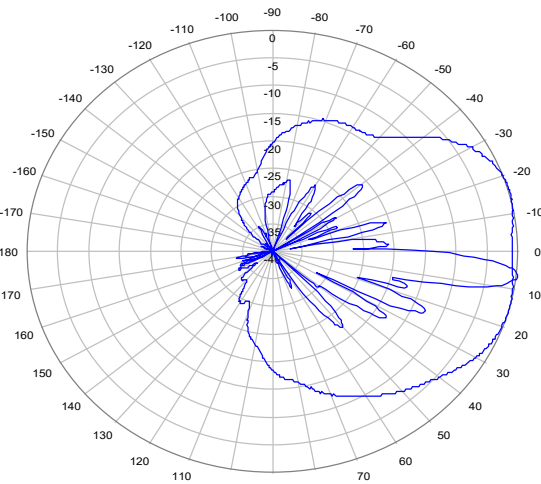
2490-2690MHz



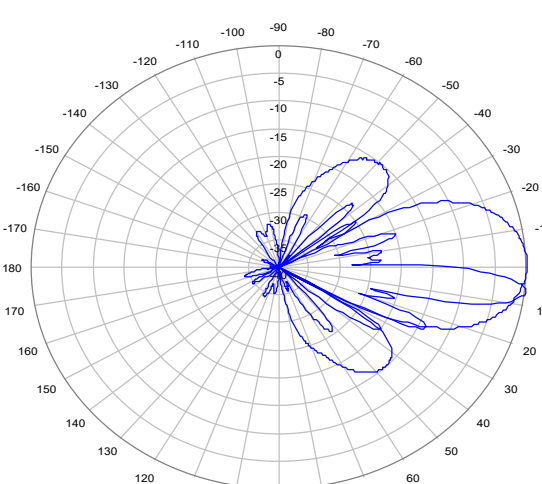
2490-2690MHz Single Column Beam



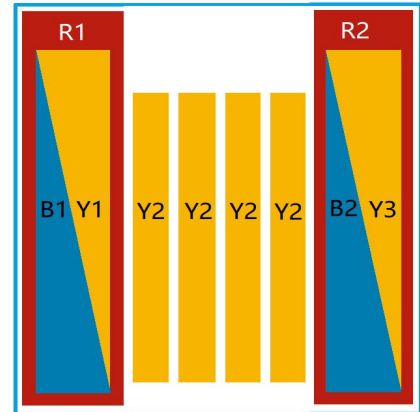
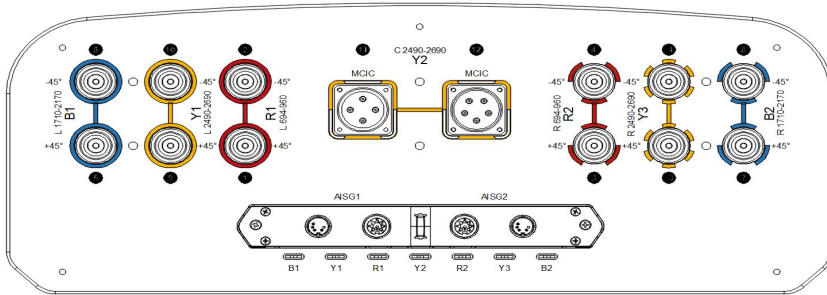
2490-2690MHz BroadCast Beam



2490-2690MHz 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
B1	5-6	1	1710-2170	MKxxxxxxxxxxxxxxxxB1
B2	7-8	7	1710-2170	MKxxxxxxxxxxxxxxxxB2
Y1	9-10	2	2490-2690	MKxxxxxxxxxxxxxxxxY1
Y2	11-12	4	2490-2690	MKxxxxxxxxxxxxxxxxY2
Y3	13-14	6	2490-2690	MKxxxxxxxxxxxxxxxxY3

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

Accessories

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