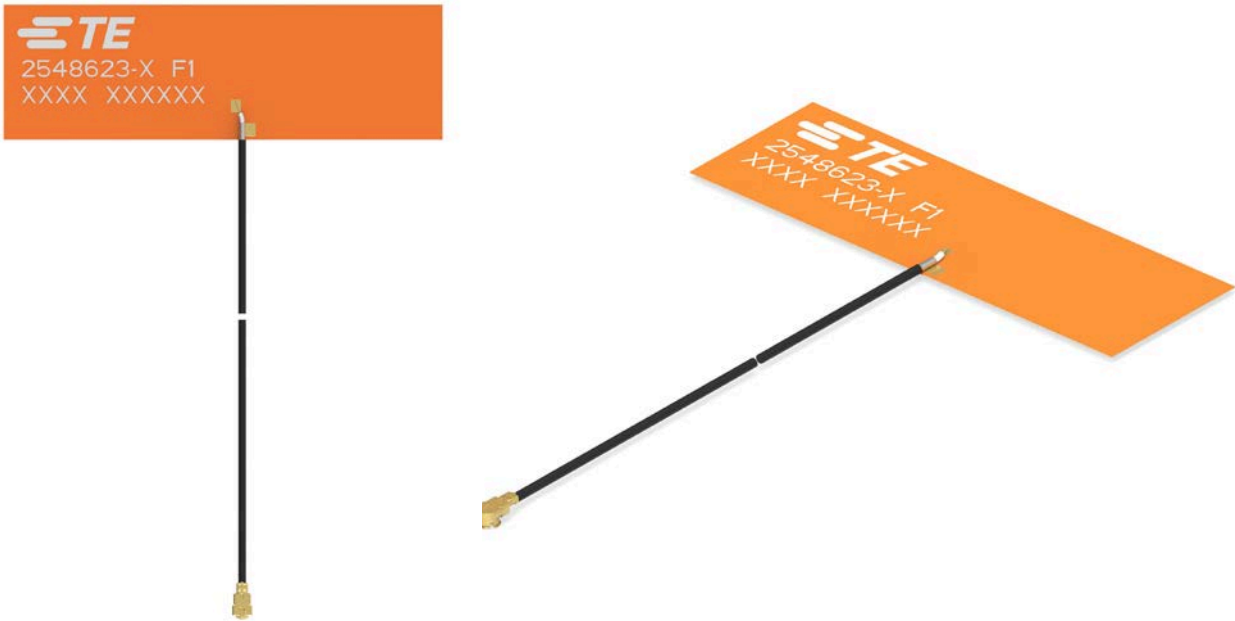




2548623-X

NTN SatCom and D2D Ready Cellular Antenna Series

Flexible Embedded antenna Optimized for L- and S- bands

2548623-X series antennas are adhesive flexible printed circuit (FPC) antennas for NTN/TN applications in the 1.518 to 2.69 GHz frequency bands, often referred to as the L- and S- bands. These antennas provide ground plane resiliency using a dipole architecture, which makes the antenna less susceptible to cable routing effects. The flexibility and adhesive backing makes the 2548624-X series easy to mount in RF transparent (e.g. plastic) enclosures, enabling environmental sealing and added protection from antenna damage. This makes the antennas ideal for current and emerging NTN/Satcom devices for both LEO and GEO systems. These high efficiency antennas can provide high quality reception for low-level satcom signals even in high multipath environments.

Features	Applications
• Supports NTN Satcom communications L-band and S-band • Dipole design reduces cable/ground plane effect • Compact & low-profile at just 65 x 20 x 0.12 mm • Adhesive backing for ease of mounting • Flexible to fit in challenging enclosures • Multiple cable length and connector options	• Precision Agriculture: Guidance & machine control • Autonomous Systems: UAVs, robots & vehicles • Surveying: Professional GIS & land surveying • Infrastructure: 5G & network synchronization • Fleet management • Logistics & heavy machinery • Outdoor and indoor rated

ORDERING INFORMATION

Part Number	Description	Cable Diameter and Length	Connector
2548623-1	Flexible adhesive mount antenna	1.13 x 50 mm	MHF1
2548623-2	Flexible adhesive mount antenna	1.13 x 100 mm	MHF1
2548623-3	Flexible adhesive mount antenna	1.13 x 200 mm	MHF1
2548623-4	Flexible adhesive mount antenna	1.13 x 50 mm	MHF4L
2548623-5	Flexible adhesive mount antenna	1.13 x 100 mm	MHF4L
2548623-6	Flexible adhesive mount antenna	1.13 x 200 mm	MHF4L

SPECIFICATIONS

ELECTRICAL SPECIFICATION		
Operating Frequency (MHz)	1518-2483	2483-2690
VSWR (Fc)	< 1.8 : 1	< 1.8 : 1
Average Efficiency Typ. (%)	75.9	77.8
Average Gain (dB)	-1.2	-1.1
Average Peak Gain (dBi)	4.2	4.5
Max Input Power	2 W	
Feed Point Impedance	50 Ohms	
Polarization	Linear	

MECHANICAL SPECIFICATION	
Material	Polymer
Dimensions L x W x H mm	65 x 20 x 0.12
Weight	< 1.3 g
Mounting	Adhesive
Mating Connector	MHF1/U.FL or MHF4
Cable Type (mm)	1.13 mm co-axial

ENVIRONMENTAL SPECIFICATION	
Relative Humidity	Non-condensing 90°C 95% RH
Operating Temperature °C (°F)	-40 to +85°C
Storage Temperature °C (°F)	-40 to +85°C
Hazardous Materials	A certificate of conformance is available from the product page on te.com.

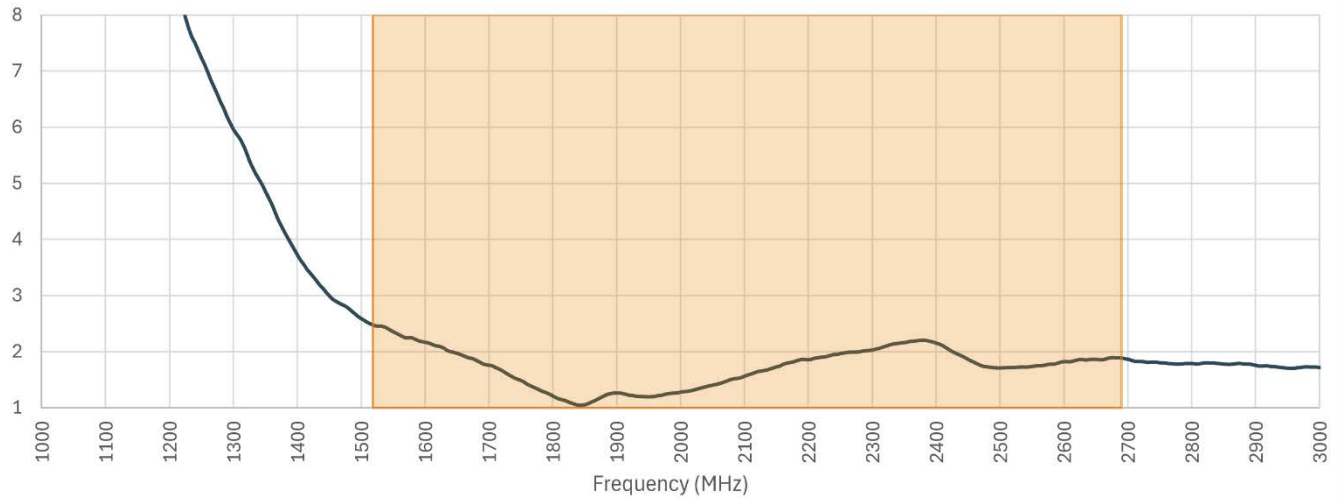
Electrical specifications and plots measured with the antenna on 2 mm thick PC/ABS sheet by 2548623-2; application data might vary.

ANTENNA PERFORMANCE

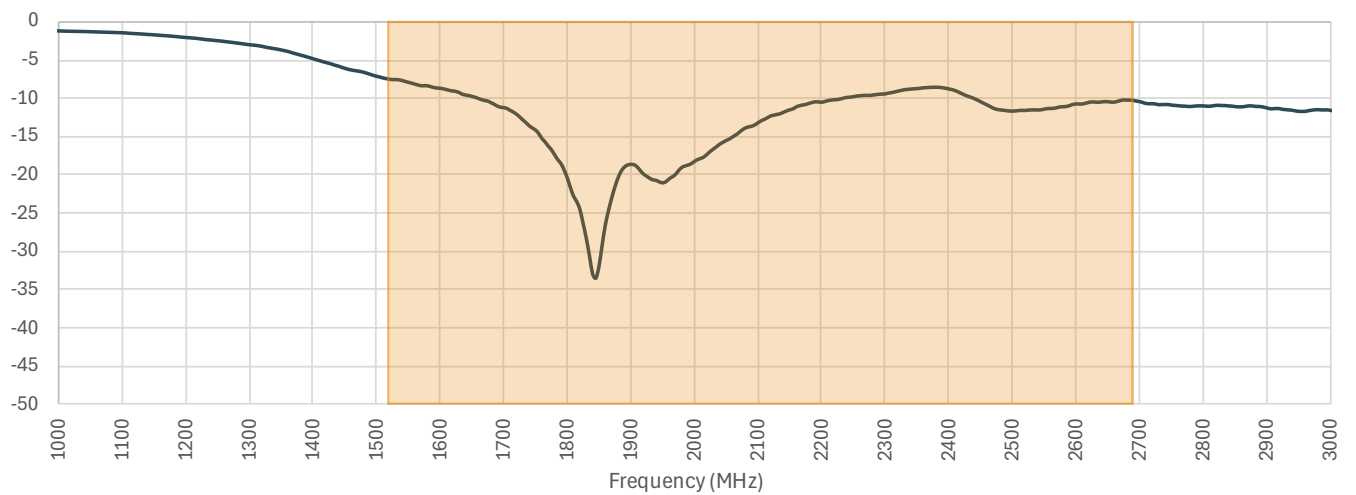
Key

Measured in Free Space

VSWR



Return Loss



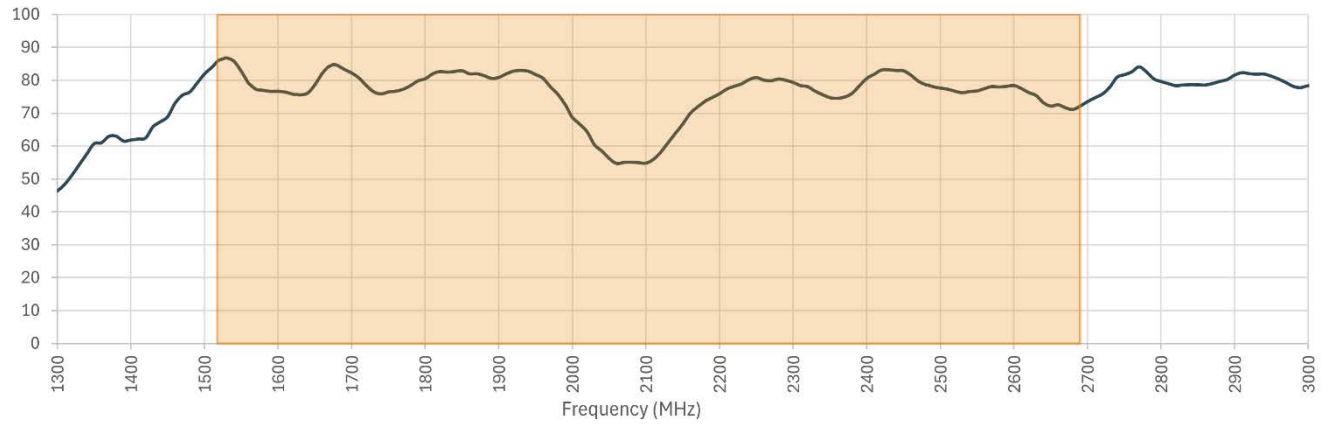
Data measured in free space of 2 mm thick PC/ABS sheet center condition; application data might vary.

ANTENNA PERFORMANCE

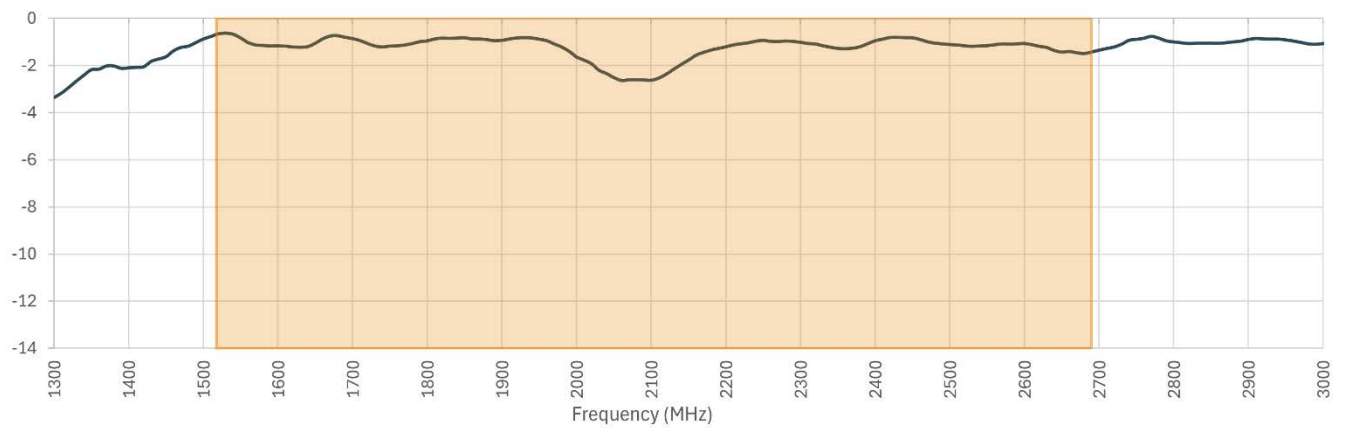
Key

Measured in Free Space

Efficiency %



Efficiency dB



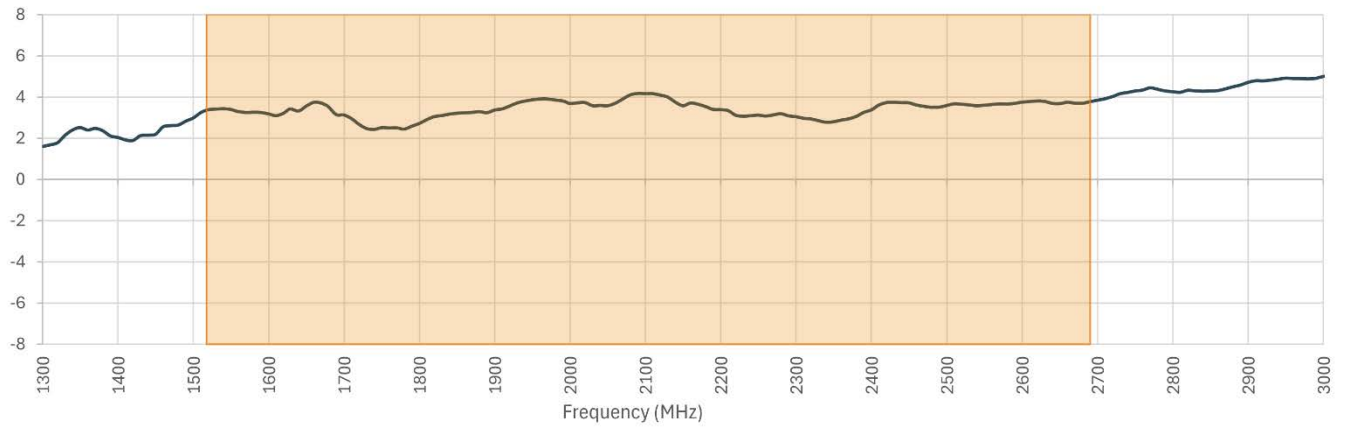
Data measured in free space of 2 mm thick PC/ABS sheet center condition; application data might vary.

ANTENNA PERFORMANCE

Key

Measured in Free Space

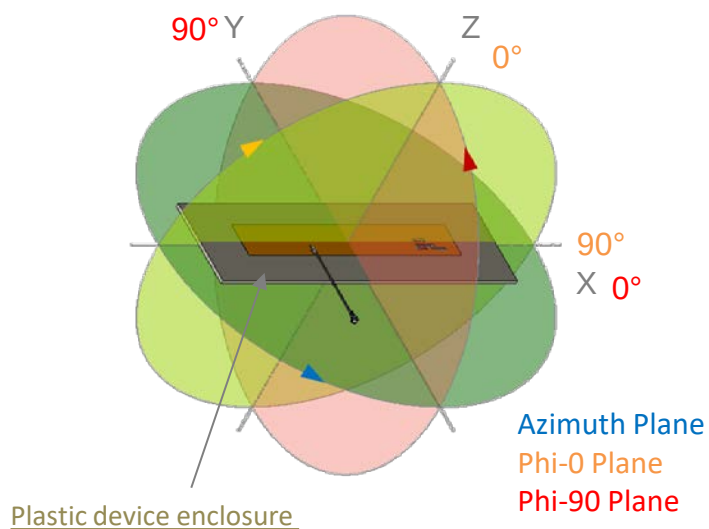
Peak Gain



Data measured in free space of 2 mm thick PC/ABS sheet center condition; application data might vary.

RADIATION PATTERNS (shown as 2548623-02)

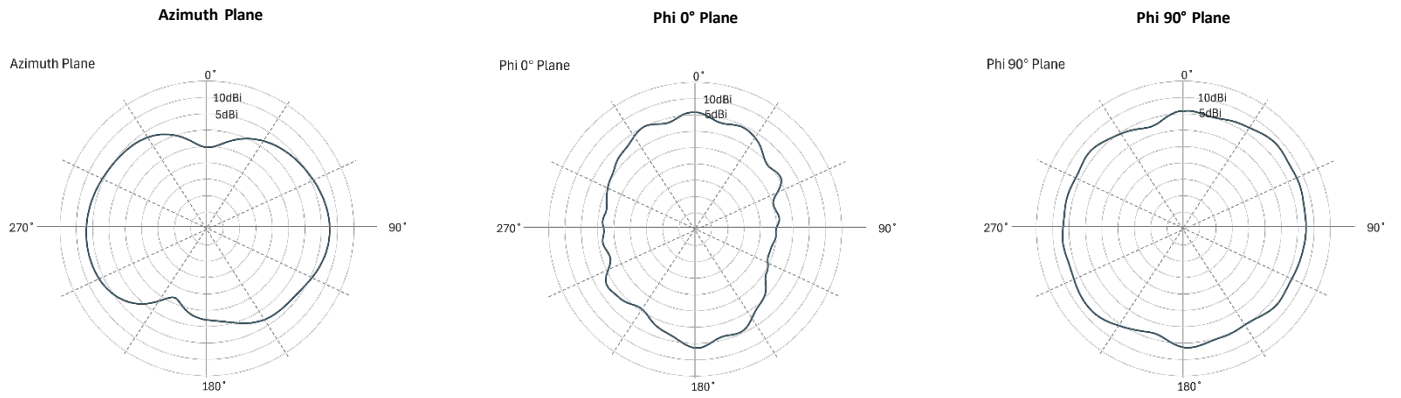
Test setup Free Space



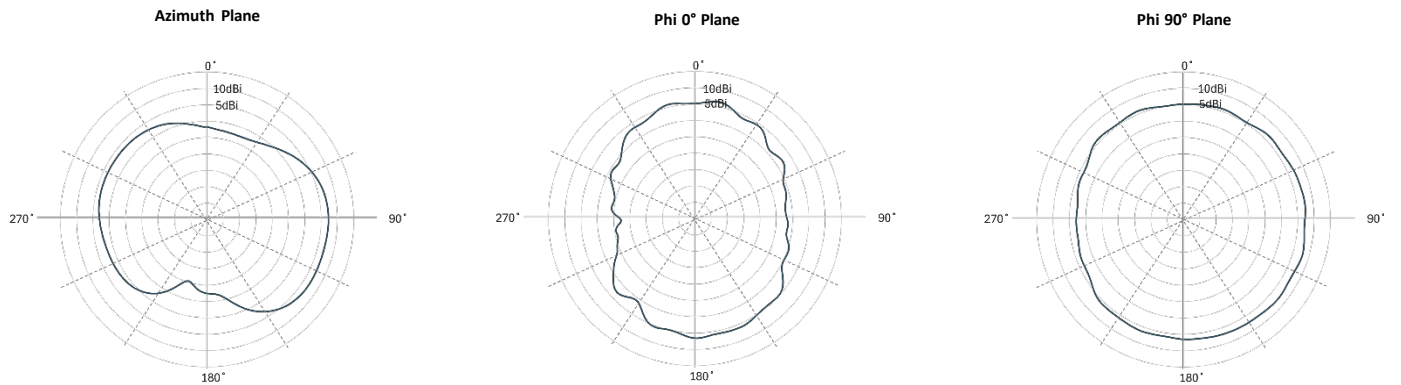
Key

Measured in Free Space

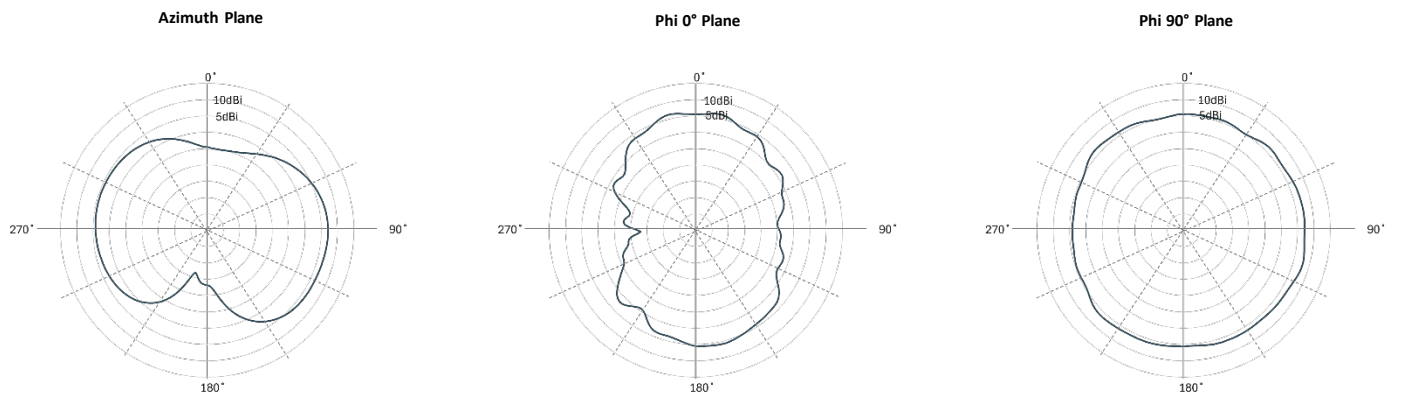
Radiation Pattern at 1518 MHz



Radiation Pattern at 1675 MHz



Radiation Pattern at 1710 MHz

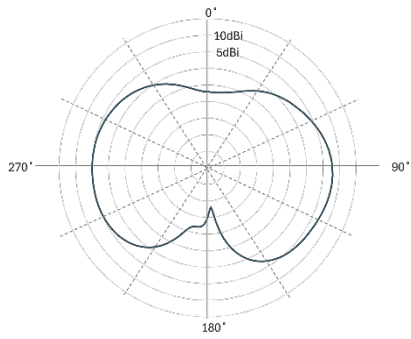


Key

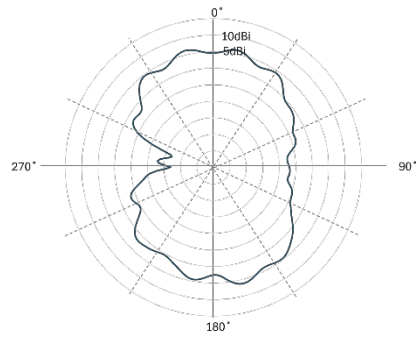
Measured in Free Space

Radiation Pattern at 1880 MHz

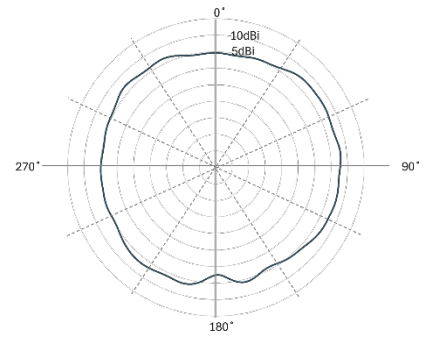
Azimuth Plane



Phi 0° Plane

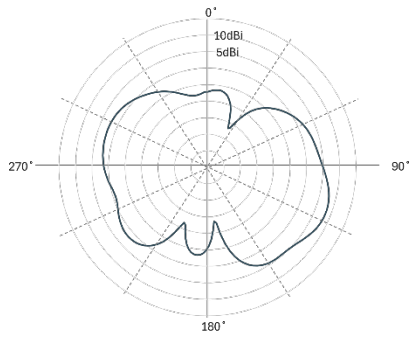


Phi 90° Plane

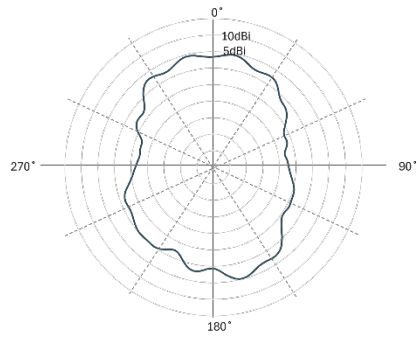


Radiation Pattern at 2020 MHz

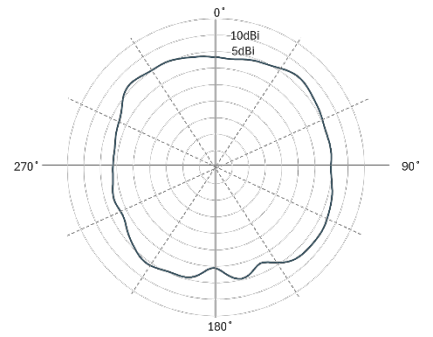
Azimuth Plane



Phi 0° Plane

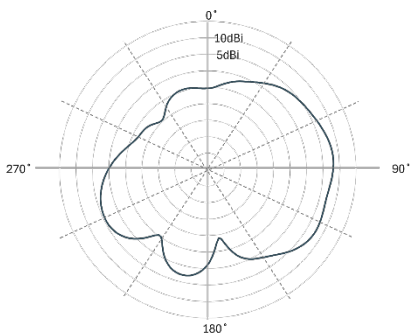


Phi 90° Plane

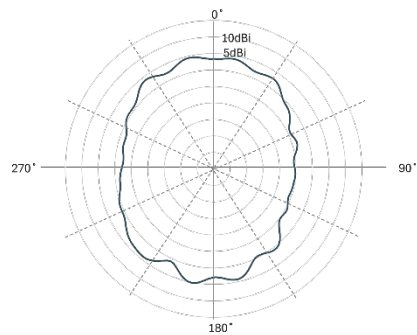


Radiation Pattern at 2170 MHz

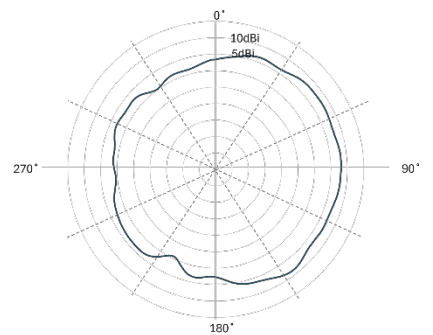
Azimuth Plane



Phi 0° Plane



Phi 90° Plane

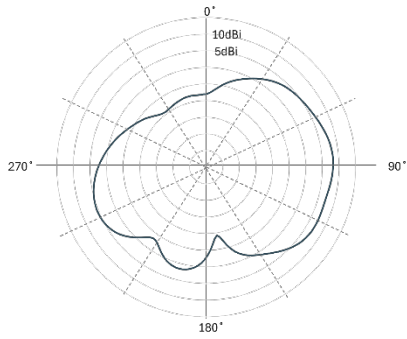


Key

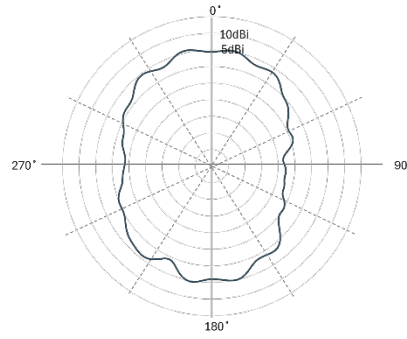
Measured in Free Space

Radiation Pattern at 2200 MHz

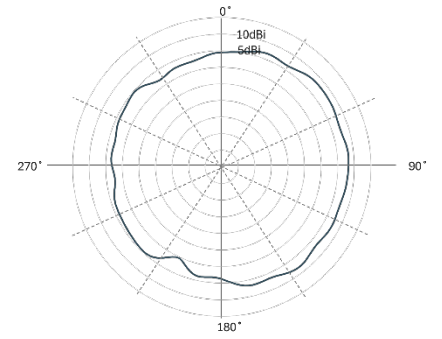
Azimuth Plane



Phi 0° Plane

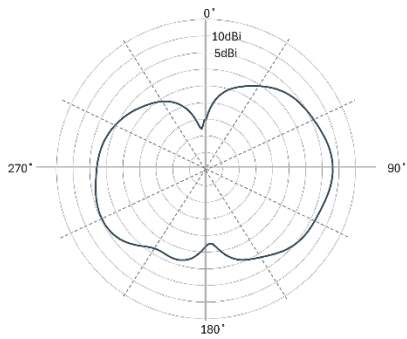


Phi 90° Plane

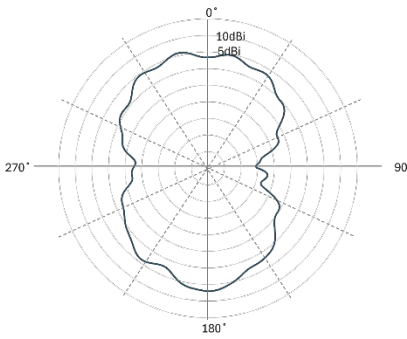


Radiation Pattern at 2500 MHz

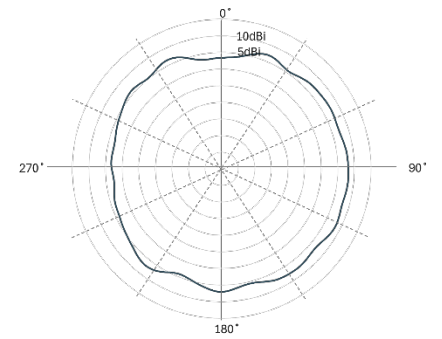
Azimuth Plane



Phi 0° Plane

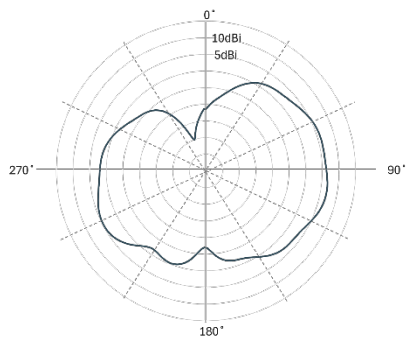


Phi 90° Plane

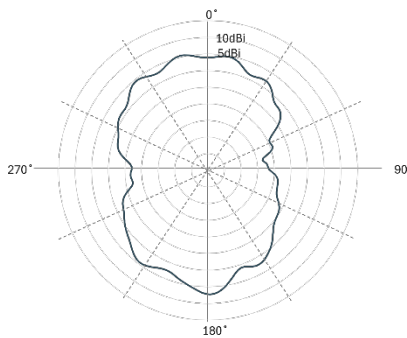


Radiation Pattern at 2690 MHz

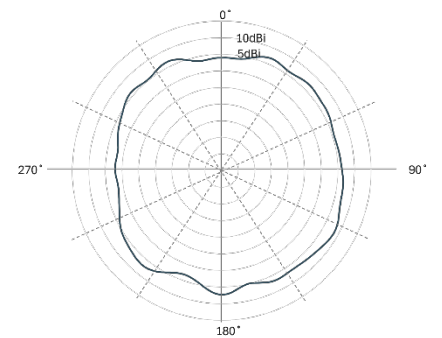
Azimuth Plane



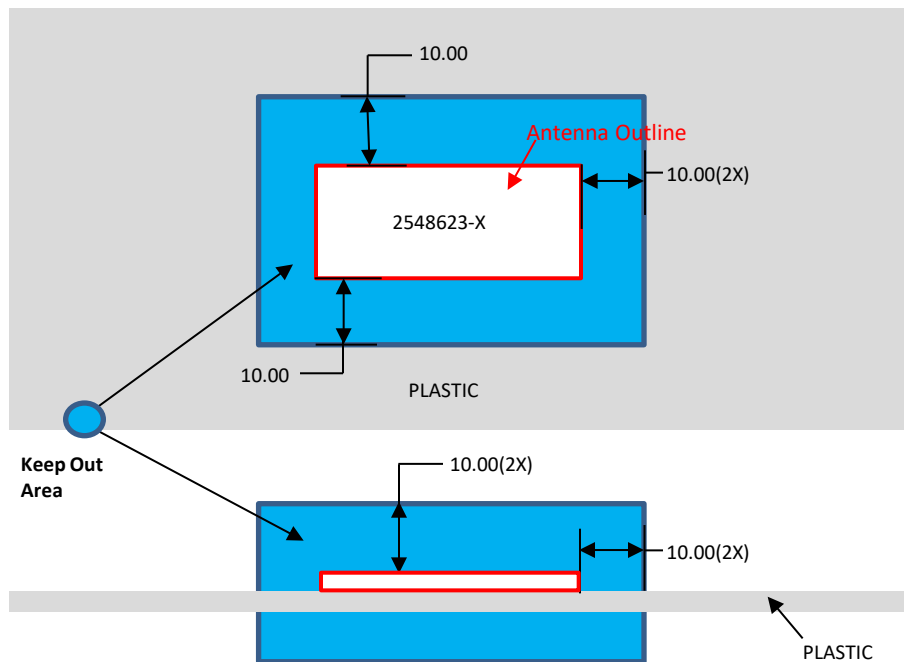
Phi 0° Plane



Phi 90° Plane



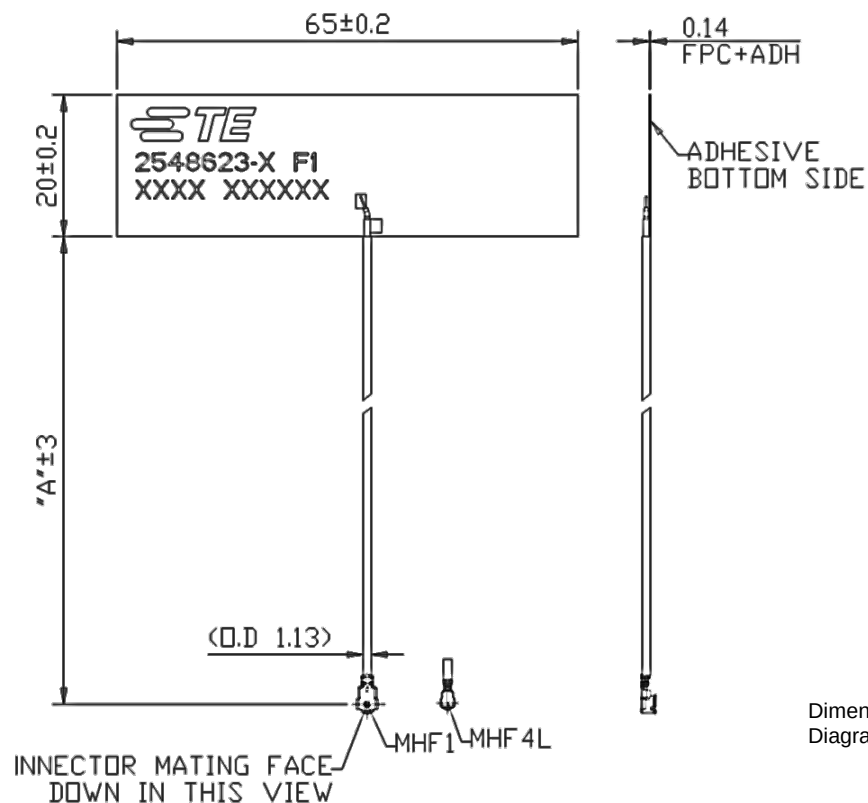
DESIGN GUIDELINES



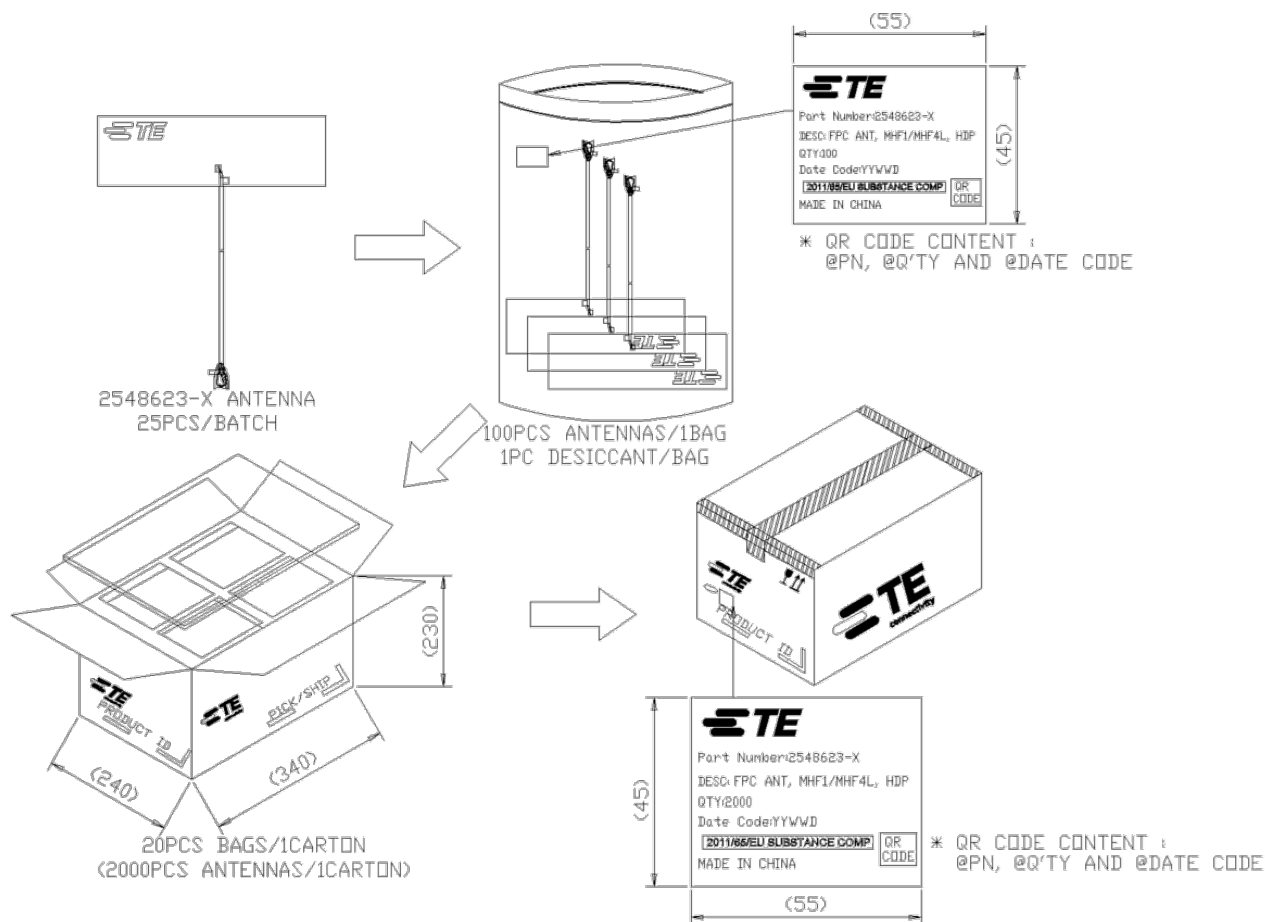
- NOTES: 1. Antenna designed to be mounted on plastic cover.
 2. Area in blue above indicates Keep Out Area.
 3. For more information, please call TE.

Dimensions: mm
 Diagram is not to scale

MECHANICAL DRAWINGS



Dimensions: mm (inch)
 Diagram is not to scale



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