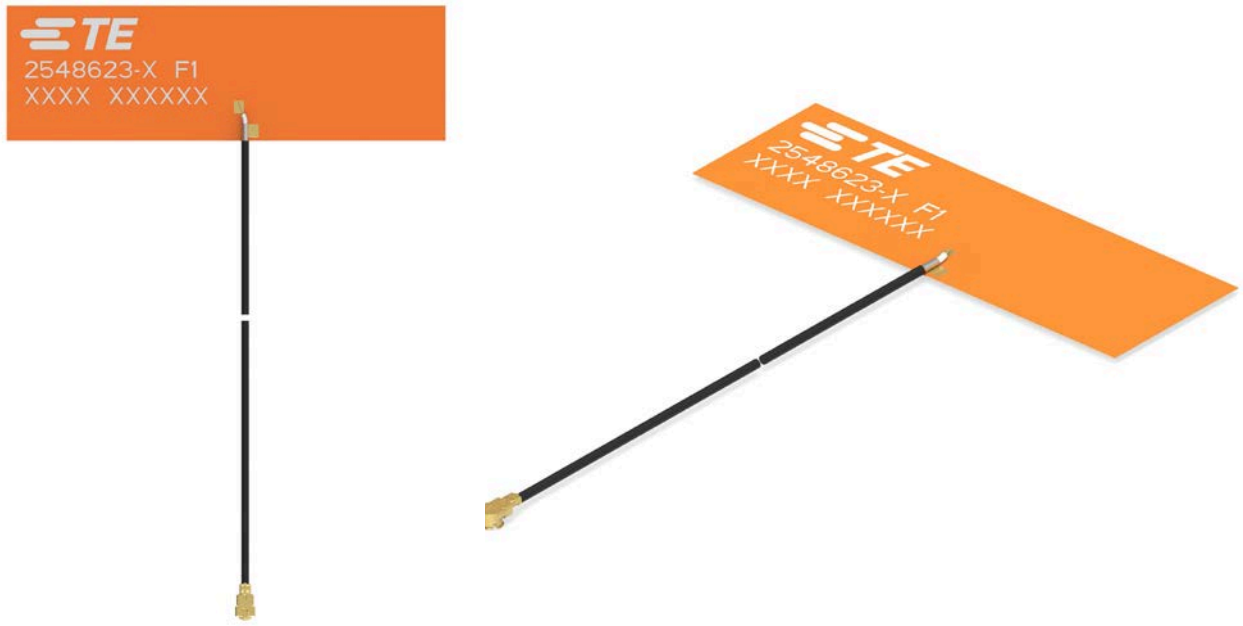


2548623-X

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

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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.

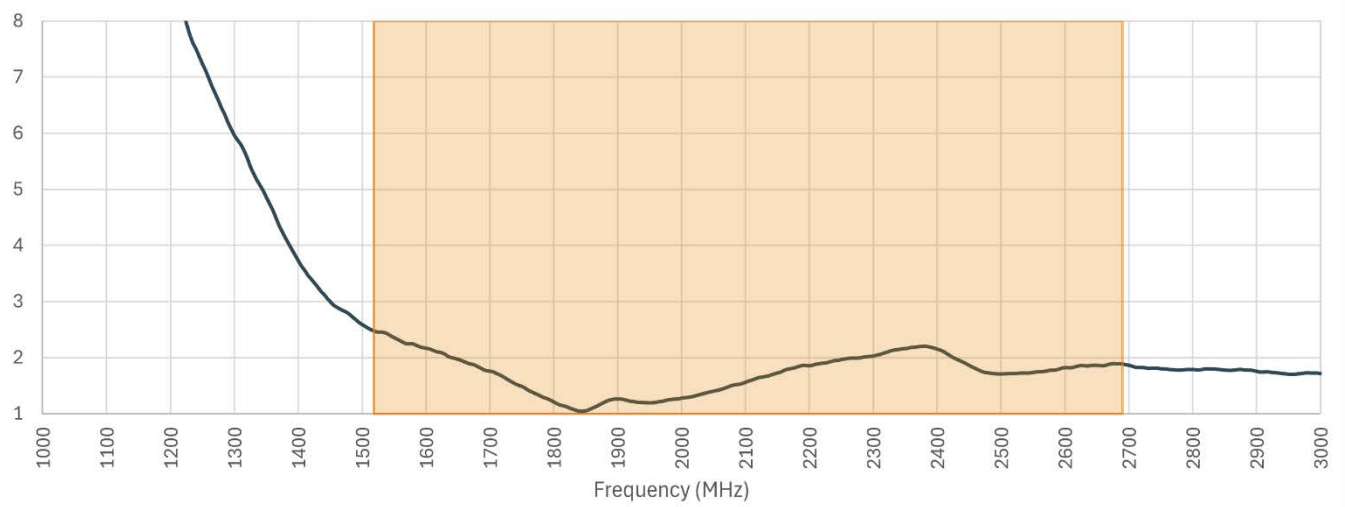
Electrical specifications and plots measured with the antenna on 2 mm thick PC/ABS sheet by 2548623-2; application data might vary.

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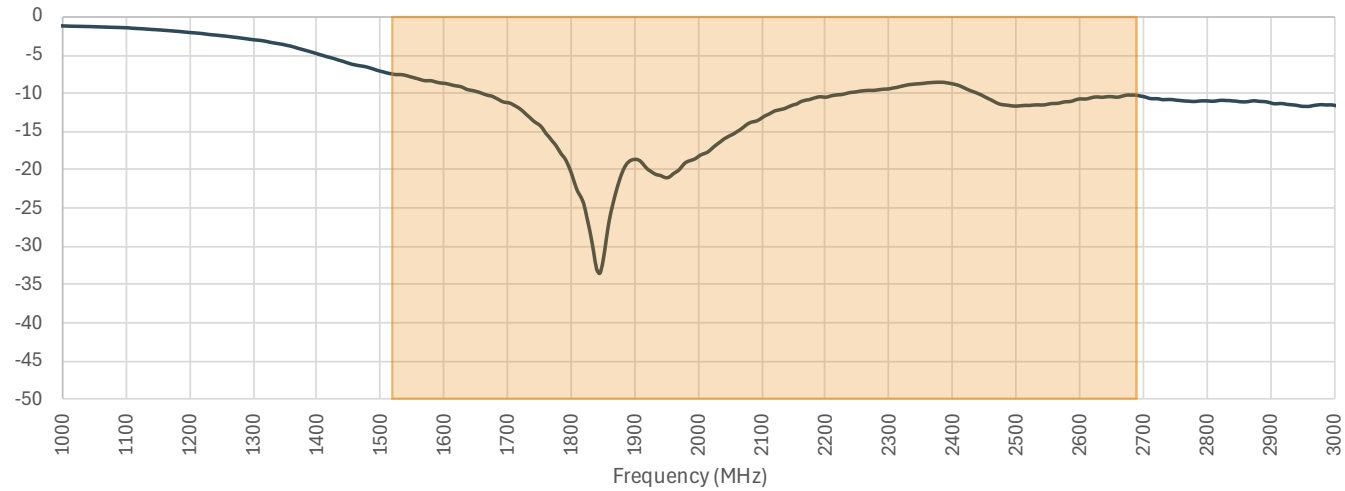
ANTENNA PERFORMANCE

Key
Measured in Free Space

VSWR



Return Loss



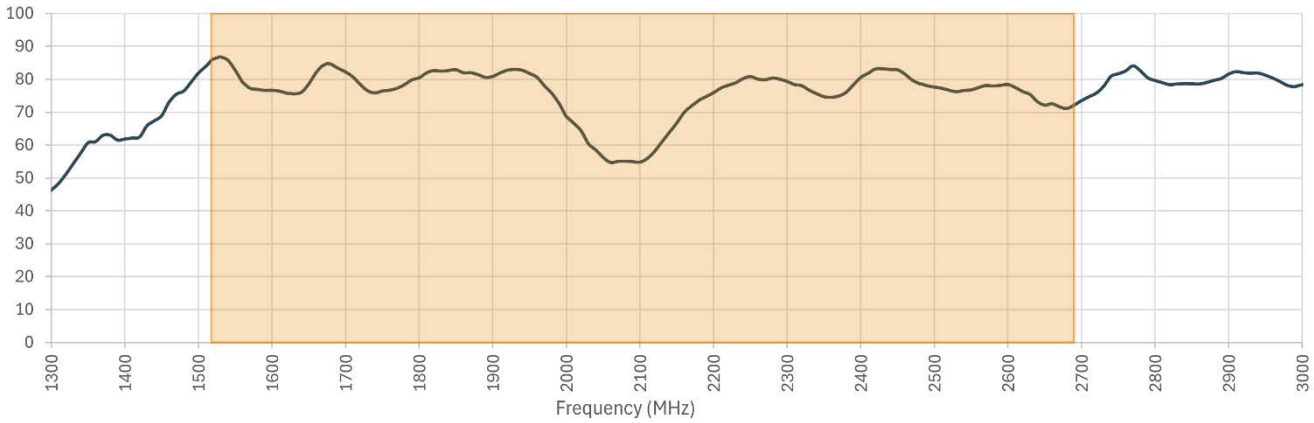
Data measured in free space of 2 mm thick PC/ABS sheet center condition; application data might vary.

Downloaded from Arrow.com.

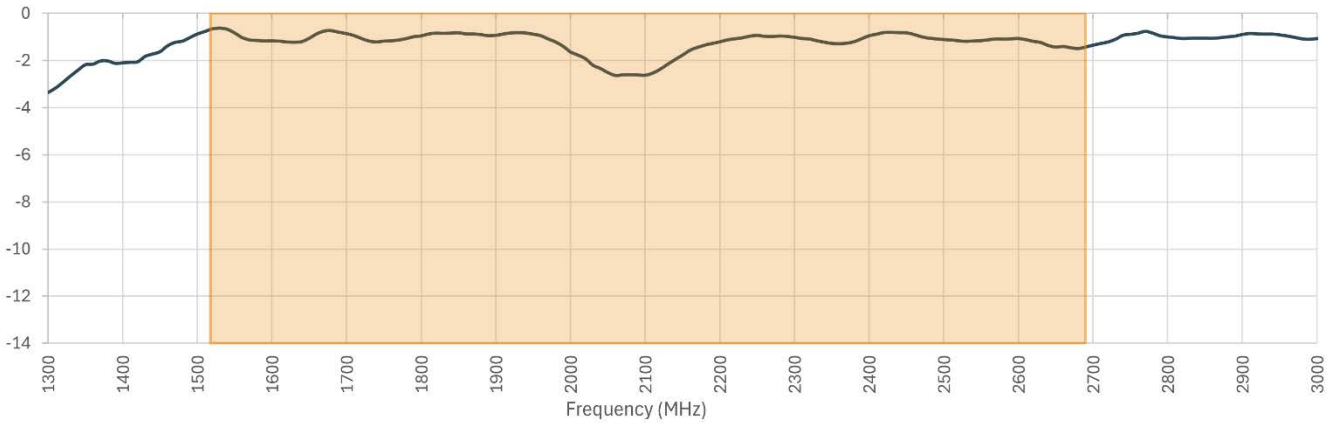
ANTENNA PERFORMANCE

Key
Measured in Free Space

Efficiency %



Efficiency dB



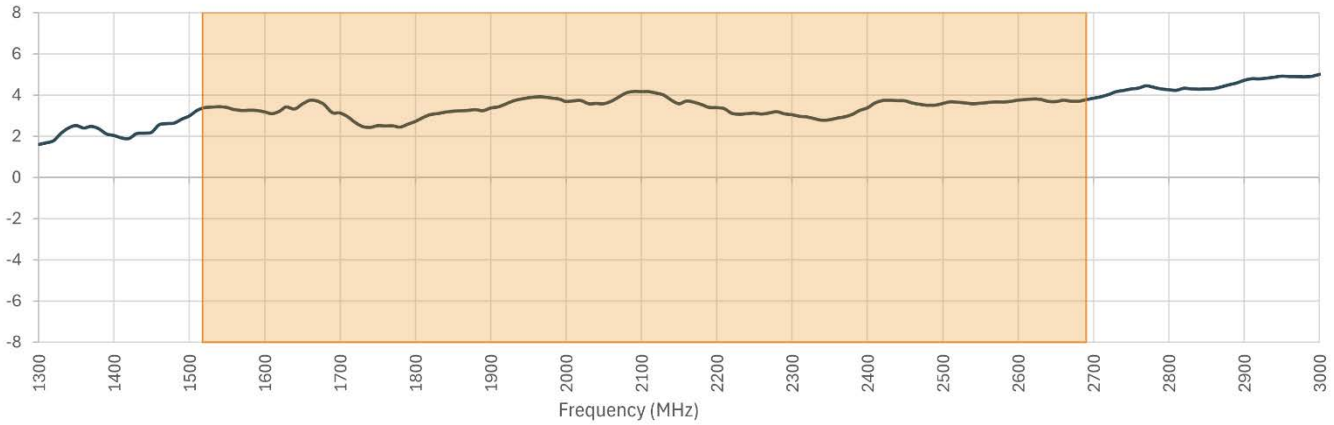
Data measured in free space of 2 mm thick PC/ABS sheet center condition; application data might vary.

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ANTENNA PERFORMANCE

Key
Measured in Free Space

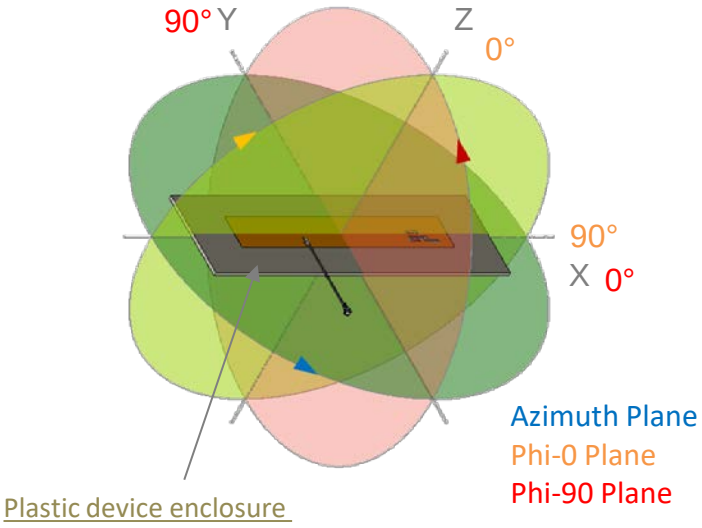
Peak Gain



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



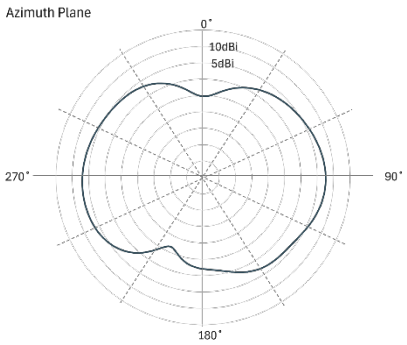
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Key

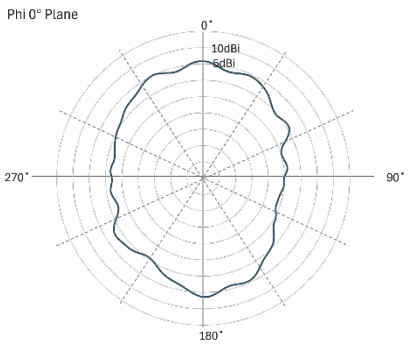
Measured in Free Space

Radiation Pattern at 1518 MHz

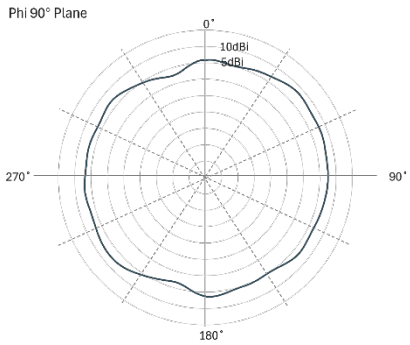
Azimuth Plane



Phi 0° Plane

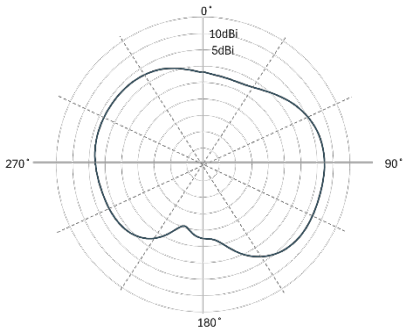


Phi 90° Plane

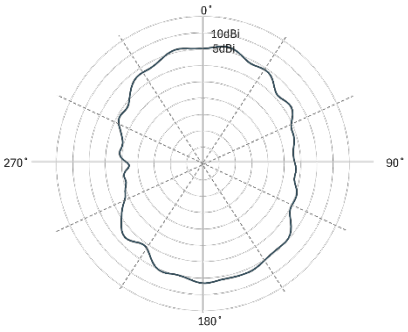


Radiation Pattern at 1675 MHz

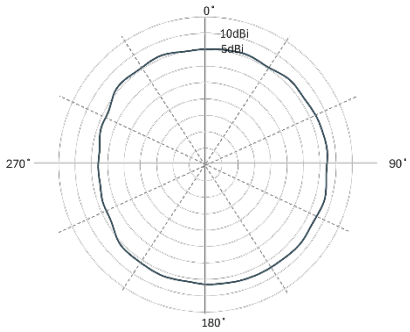
Azimuth Plane



Phi 0° Plane

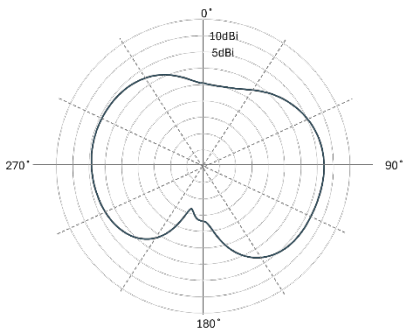


Phi 90° Plane

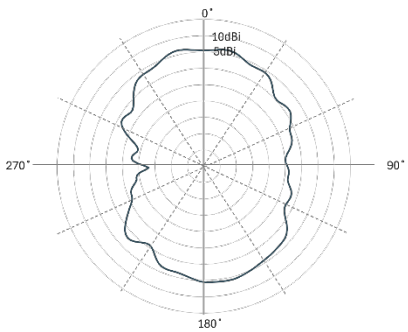


Radiation Pattern at 1710 MHz

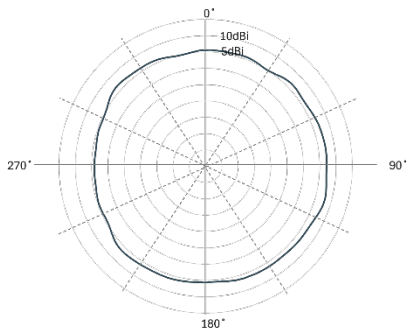
Azimuth Plane



Phi 0° Plane



Phi 90° Plane



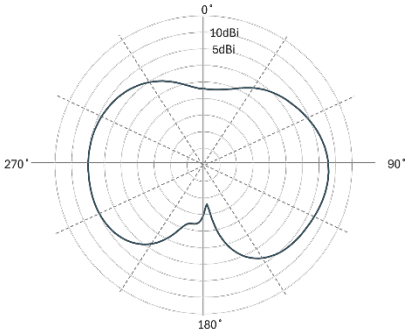
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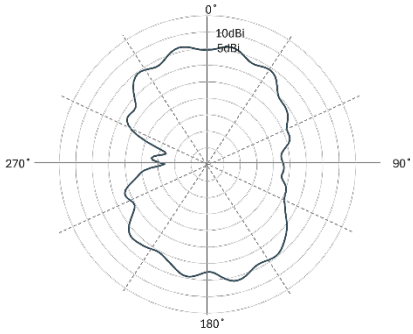
Measured in Free Space

Radiation Pattern at 1880 MHz

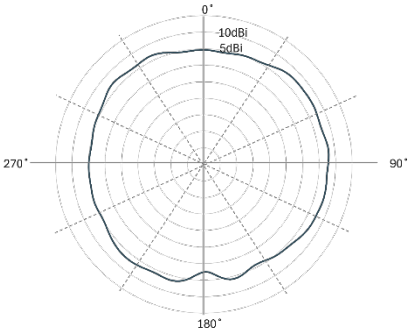
Azimuth Plane



Phi 0° Plane

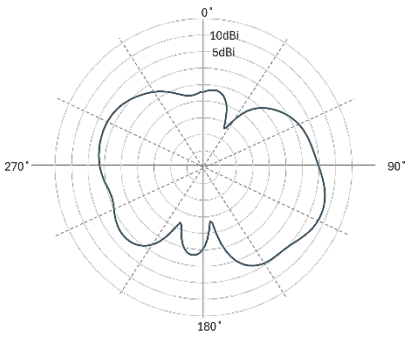


Phi 90° Plane

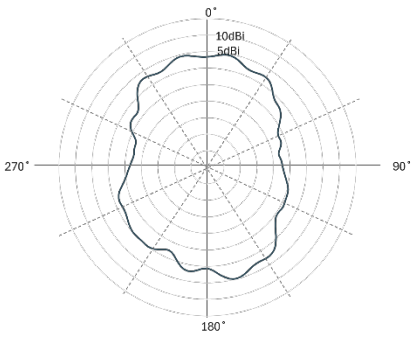


Radiation Pattern at 2020 MHz

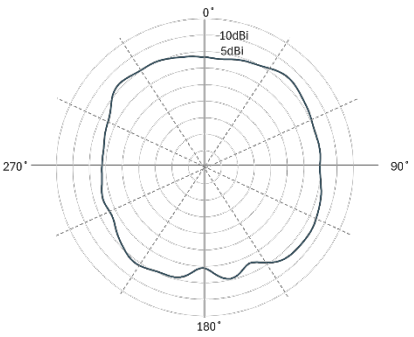
Azimuth Plane



Phi 0° Plane

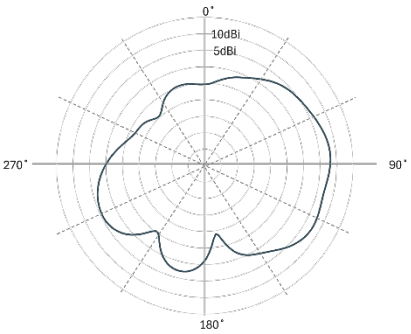


Phi 90° Plane

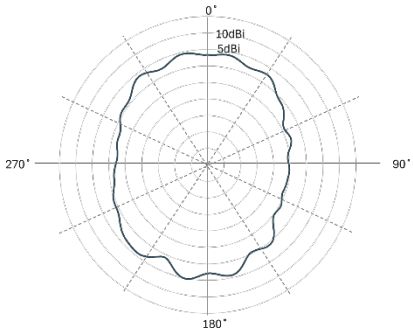


Radiation Pattern at 2170 MHz

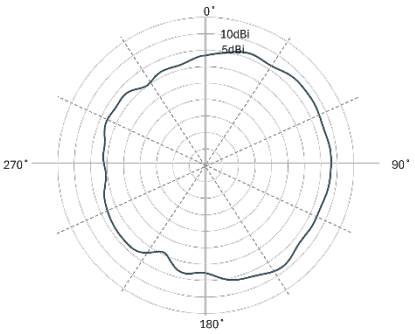
Azimuth Plane



Phi 0° Plane



Phi 90° Plane



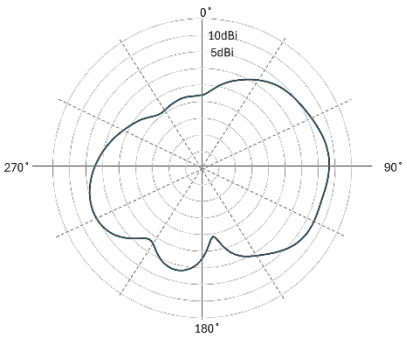
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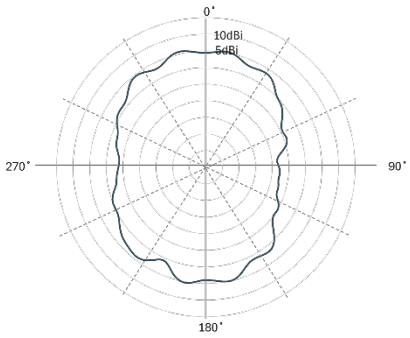
Measured in Free Space

Radiation Pattern at 2200 MHz

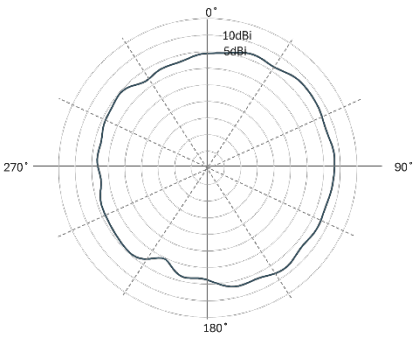
Azimuth Plane



Phi 0° Plane

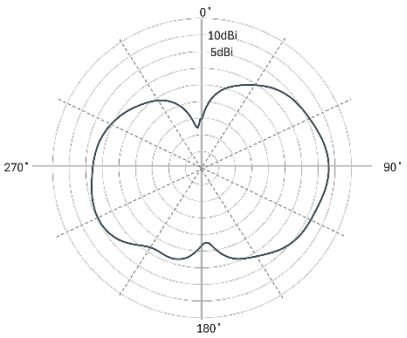


Phi 90° Plane

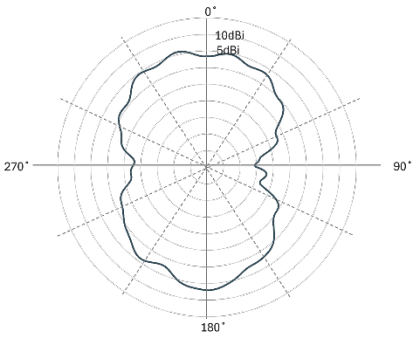


Radiation Pattern at 2500 MHz

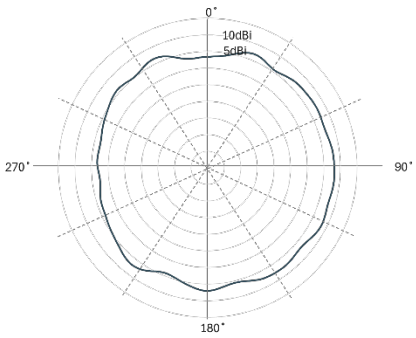
Azimuth Plane



Phi 0° Plane

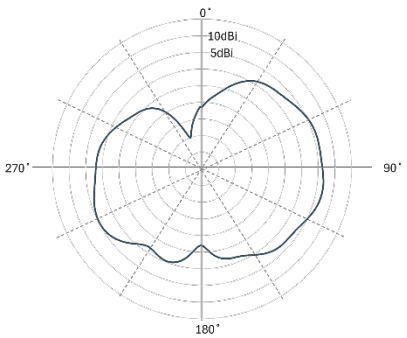


Phi 90° Plane

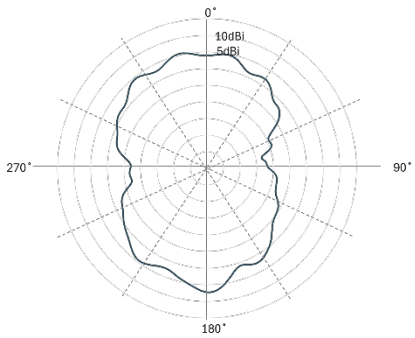


Radiation Pattern at 2690 MHz

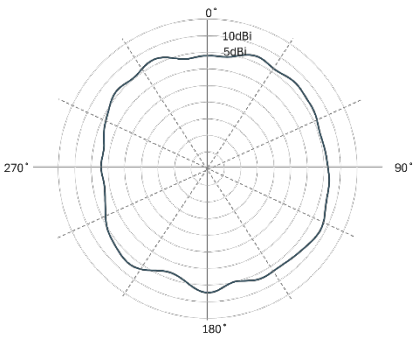
Azimuth Plane



Phi 0° Plane

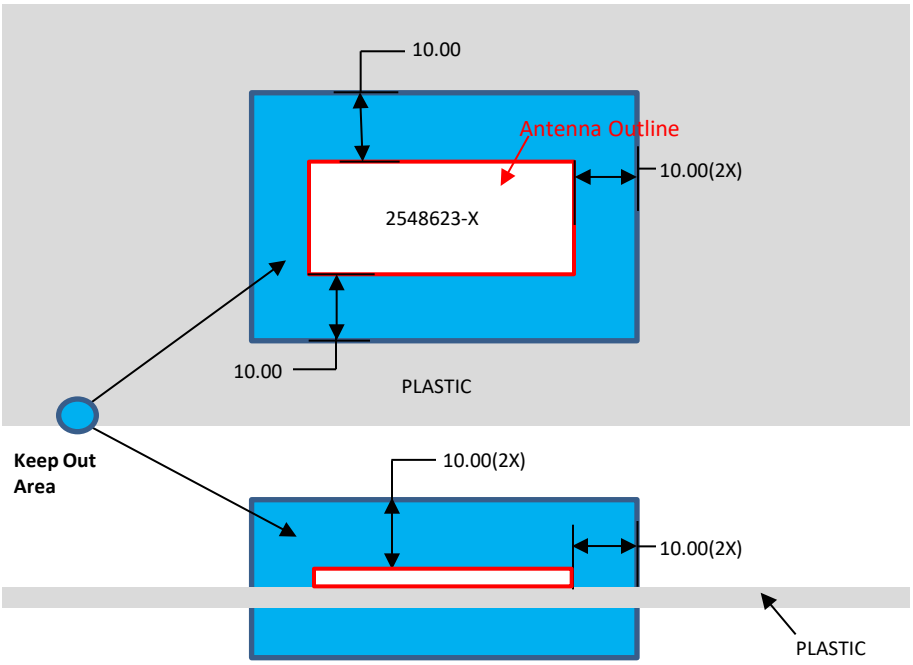


Phi 90° Plane



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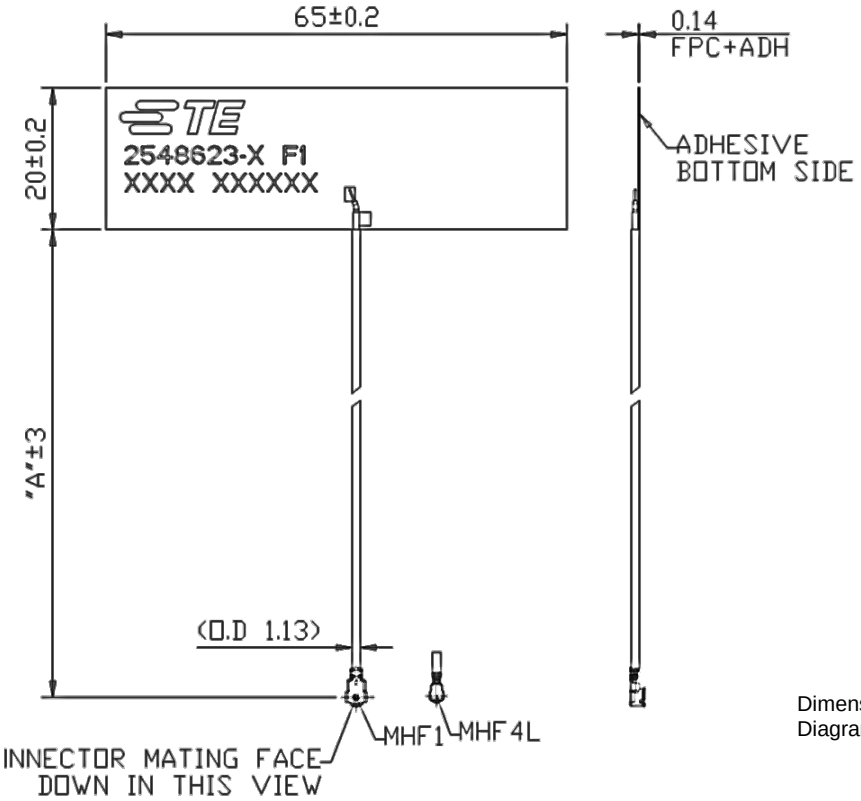
DESIGN GUIDELINES



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

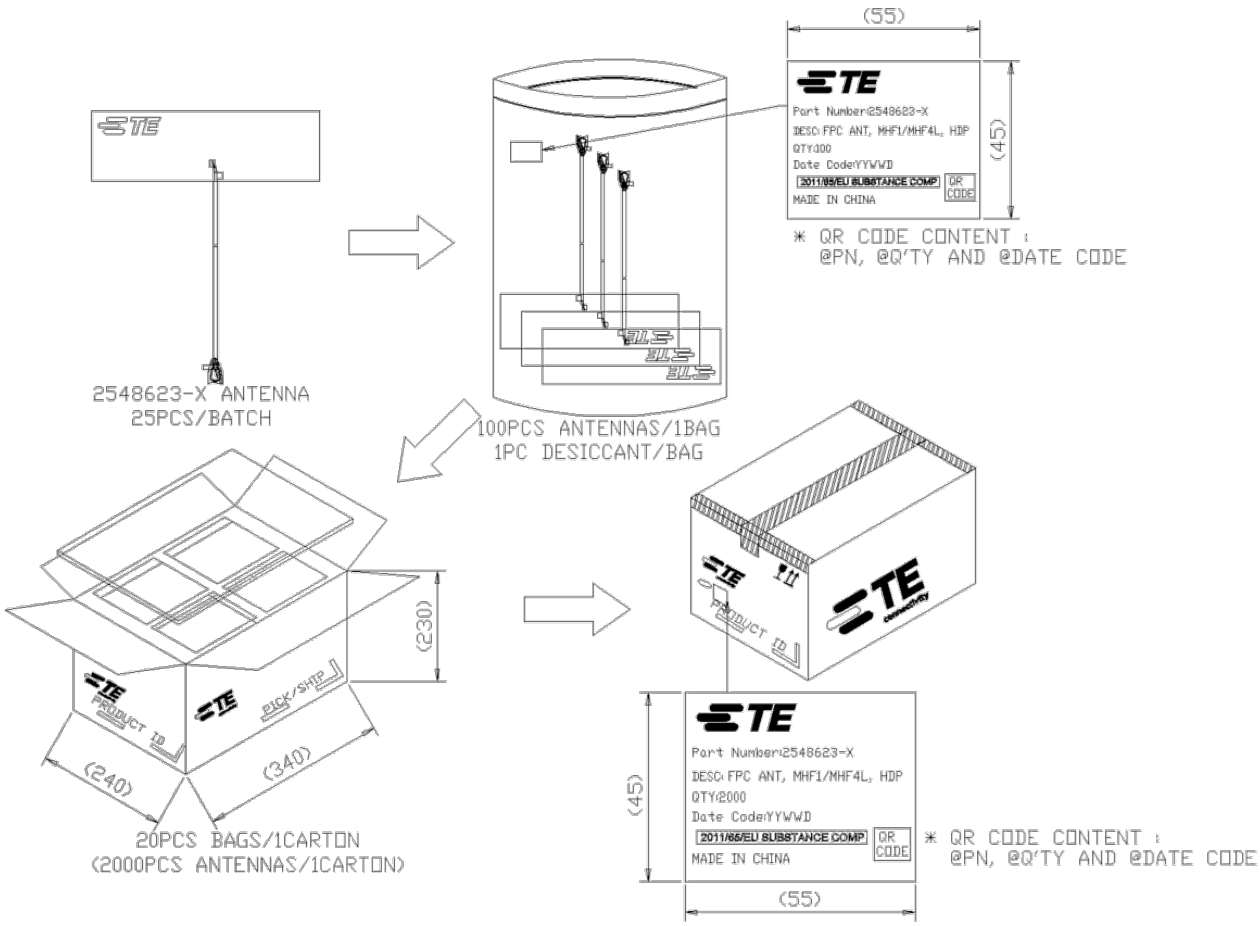
MECHANICAL DRAWINGS



Dimensions: mm (inch)
Diagram is not to scale

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PACKAGING



TE TECHNICAL SUPPORT CENTER

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Germany:	+49 (0) 6251-133-1999
UK:	+44 (0) 800-267666
France:	+33 (0) 1-3420-8686
Netherlands:	+31 (0) 73-6246-999
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