



698 – 4200 MHz Europe Cellular, LTE , FR1 COMBINATION ANTENNA

Part Number: L000486-XX

(see page 10 for details)

FEATURES & BENEFITS

- Cellular world band coverage 698-4200 MHz for 5G, LTE, NB-IoT and Cat-M
- Covers European bands and commonly used world wide bands (excl. band 71)
- Flexible antenna with adhesive backing simplifies mounting within the device
- Different cable length and connector options available

SPECIFICATIONS (for 100 mm cable length. Others see page 2)

Frequency Range (MHz)	698-960	1427-1517	1690-2200	2200-2400	2496-2690	3300-3800	3800-4200
VSWR	< 3.0:1	< 2.5:1	< 2.5:1	< 2.5:1	< 2.5:1	< 2.0:1	< 2.0:1
Average Efficiency	46 %	53 %	55 %	52 %	54 %	62 %	64%
Peak Gain	0.7 dBi	3.6 dBi	4.1 dBi	5.6 dBi	3.0 dBi	3.1 dBi	2.7 dBi
Average Gain	-3.4 dBi	-2.7 dBi	-2.7 dBi	-2.9 dBi	-2.7 dBi	-2.1 dBi	-1.9 dBi
Power Handling	10 Watt cw						
Feed Point Impedance	50 ohms						
Polarization	Linear						
Size	90.0 mm x 15.0 mm x 1.20 mm						
Weight	< 3.7 g						
Mounting	Adhesive Tape						
Mating Connectors	MHF and MHF4L type, Refer to page 10						
Cable	1.13mm Dia., Refer to page 10						
Operating Temperature	-40 to +85°C						
Storage Temperature	-40 to +85°C						
Hazardous Materials	A certificate of conformance is available from the product page on TE website.						



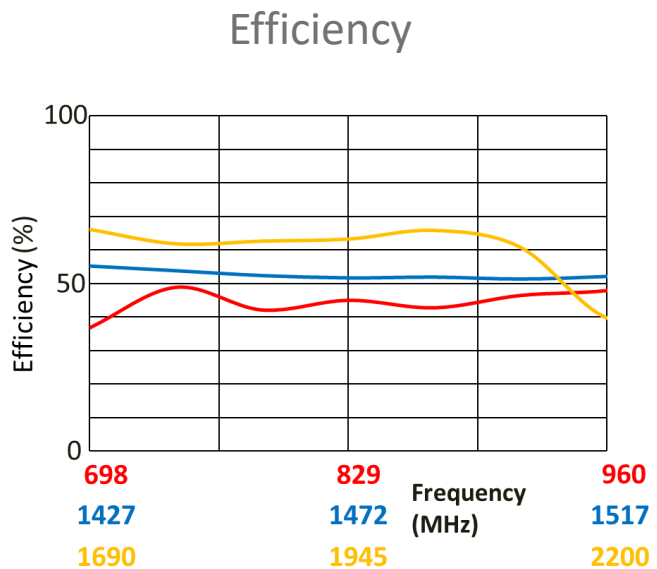
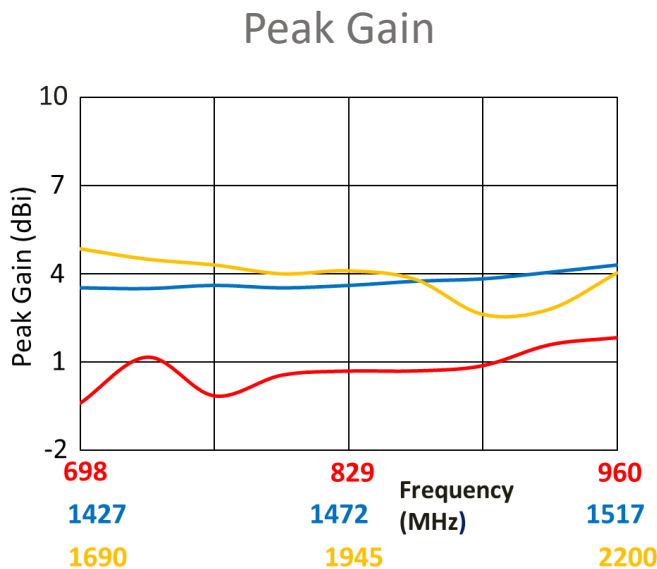
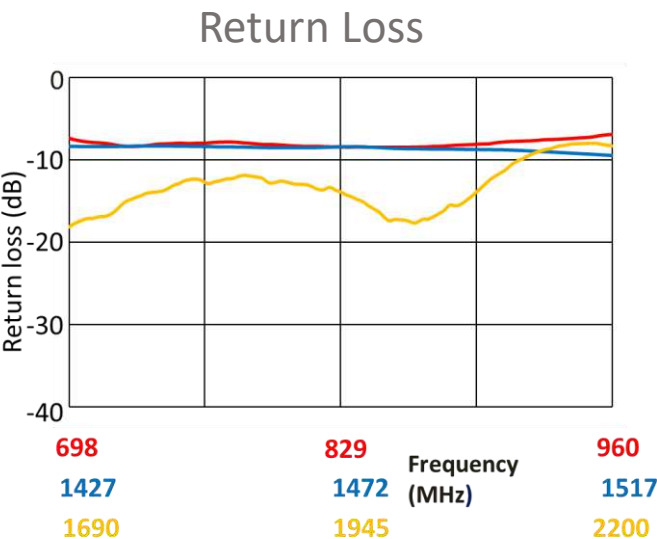
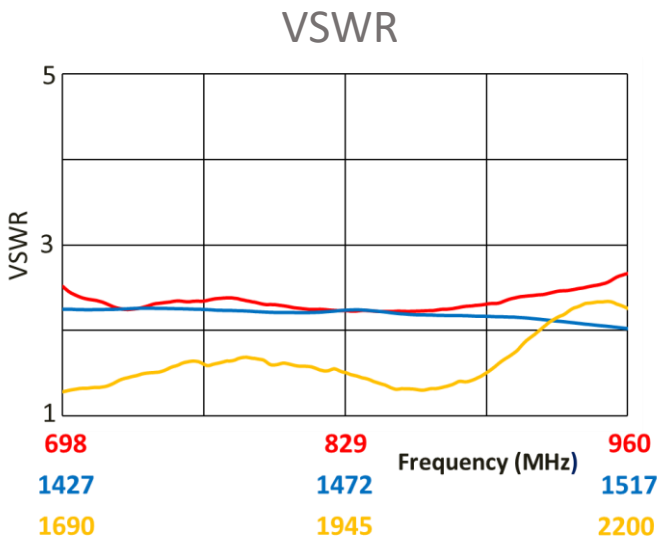
Antenna RF Specifications with different cable assemblies

Cable Length	RF DATA	Frequency Range (MHz)						
		698-960	1427-1517	1690-2200	2200-2400	2496-2690	3300-3800	3800-4200
50 mm	VSWR	< 3.0 :1	< 3.0 :1	<3.0 :1	< 2.5 :1	< 2.5 :1	<2.0 :1	<2.0 :1
	Avg. Efficiency	49.1 %	65.4 %	57.9 %	54.6 %	58 %	62.7 %	67.5 %
	Peak Gain (Max)	1.3 dBi	3.8 dBi	3.2 dBi	3.5 dBi	3.9 dBi	3.5 dBi	3.9 dBi
	Average Gain	-3.1 dBi	-1.9 dBi	-2.5 dBi	-2.6 dBi	-2.4 dBi	-2.0 dBi	-2.4 dBi
100 mm	VSWR	< 3.0 :1	< 2.5 :1	<2.5 :1	< 2.5 :1	< 2.5 :1	<2.0 :1	<2.0 :1
	Avg. Efficiency	46 %	53 %	55 %	52 %	54 %	62 %	64 %
	Peak Gain (Max)	0.69 dBi	3.6 dBi	4.11 dBi	5.56 dBi	2.98 dBi	3.11 dBi	2.74 dBi
	Average Gain	-3.4 dBi	-2.7 dBi	-2.7 dBi	-2.9 dBi	-2.7 dBi	-2.1 dBi	-1.9 dBi
150 mm	VSWR	< 2.5 :1	< 2.5 :1	<2.5 :1	< 2.5 :1	< 2.5 :1	<2.0 :1	<2.0 :1
	Avg. Efficiency	55.8 %	73.3 %	57.5 %	56.1 %	57.8 %	63.3 %	62.4 %
	Peak Gain (Max)	2.3 dBi	4.0 dBi	3.3 dBi	3.1 dBi	3.5 dBi	2.9 dBi	3.3 dBi
	Average Gain	-2.6 dBi	-1.4 dBi	-2.5 dBi	-2.6 dBi	-2.4 dBi	-2.0 dBi	-2.1 dBi
200 mm	VSWR	< 2.5 :1	< 2.5 :1	<2.5 :1	< 2.5 :1	< 2.5 :1	<2.0 :1	<2.0 :1
	Avg. Efficiency	57.2 %	64.9 %	59.2 %	53.5 %	55.7 %	59.9 %	58.4 %
	Peak Gain (Max)	2.6 dBi	2.7 dBi	2.9 dBi	3.0 dBi	3.6 dBi	2.8 dBi	2.6 dBi
	Average Gain	-2.4 dBi	-1.9 dBi	-2.4 dBi	-2.7 dBi	-2.5 dBi	-2.2 dBi	-2.3 dBi

CABLE LOSS

OD 1.13mm							
Freq. Range (MHz)	617-960	1427-1517	1690-2400	2496-2690	3300-3800	3800-4200	4400-5000
Cable attenuation (dB/m)	< 2.2	<2.9	< 3.69	< 4.0	<4.5	< 4.7	< 5.0

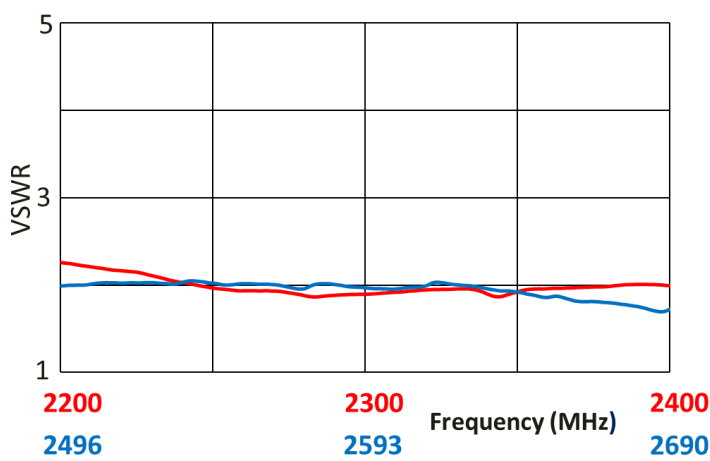
RF DATA (Shown as L000486-2 : Others can vary with different cable lengths.)



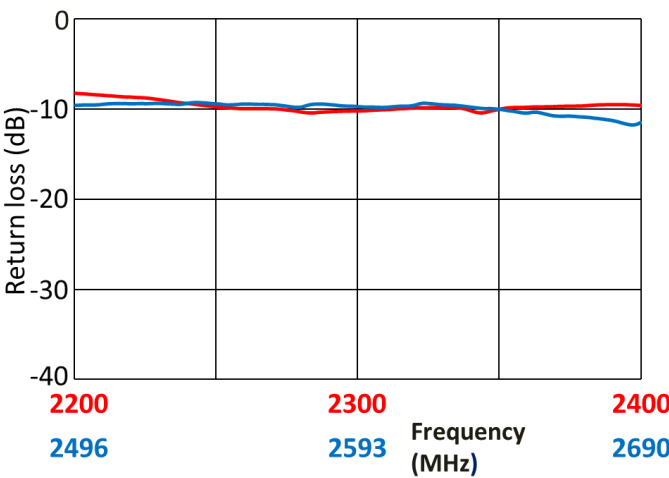
Data measured in free space and on 150 x 150 x 1.8 mm PC plastic

RF DATA (Shown as L000486-2 : Others can vary with different cable lengths.)

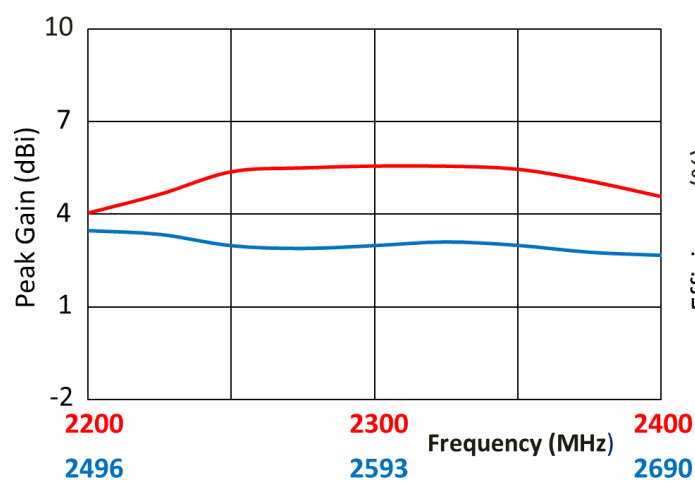
VSWR



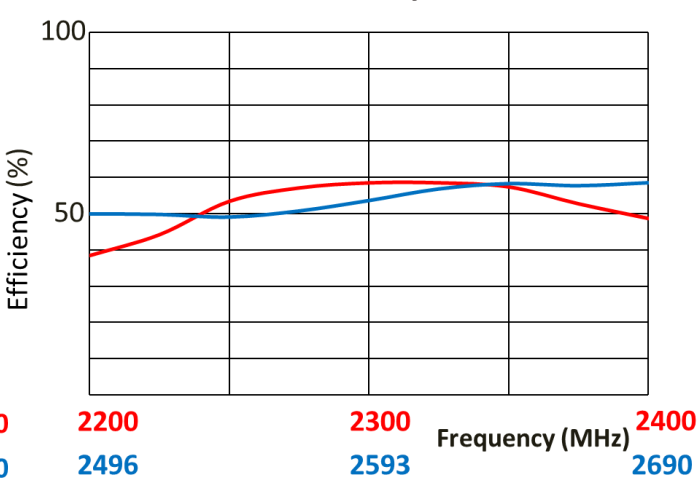
Return Loss



Peak Gain



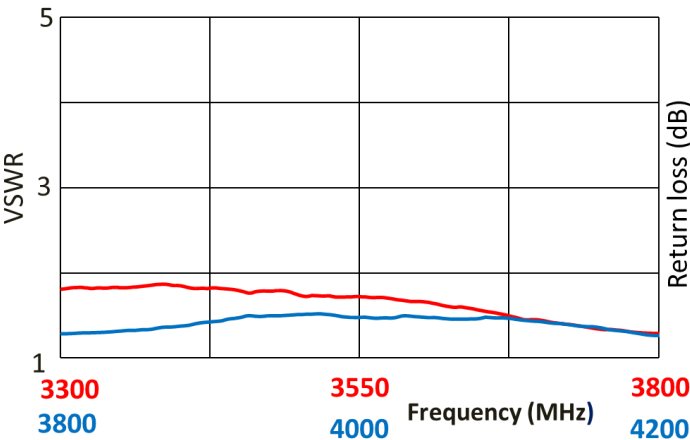
Efficiency



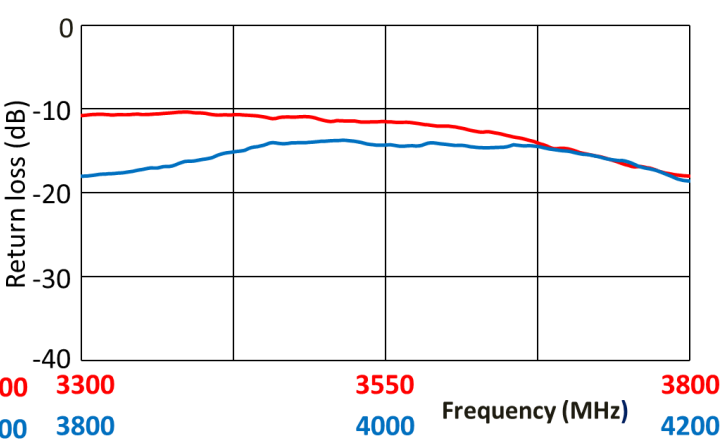
Data measured in free space and on 150 x 150 x 1.8 mm PC plastic

RF DATA (Shown as L000486-2 : Others can vary with different cable lengths.)

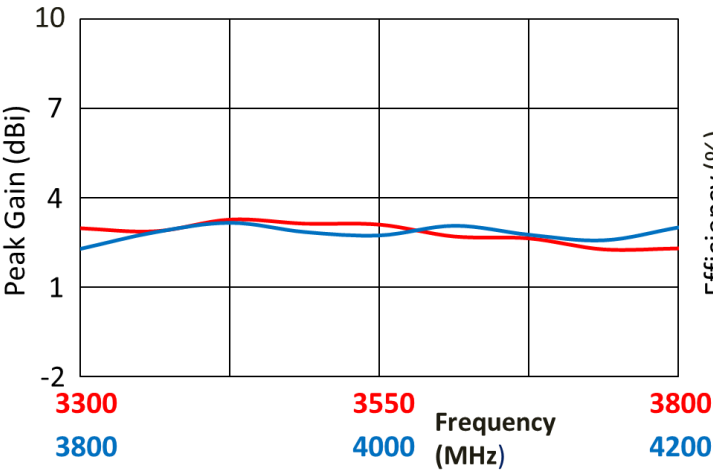
VSWR



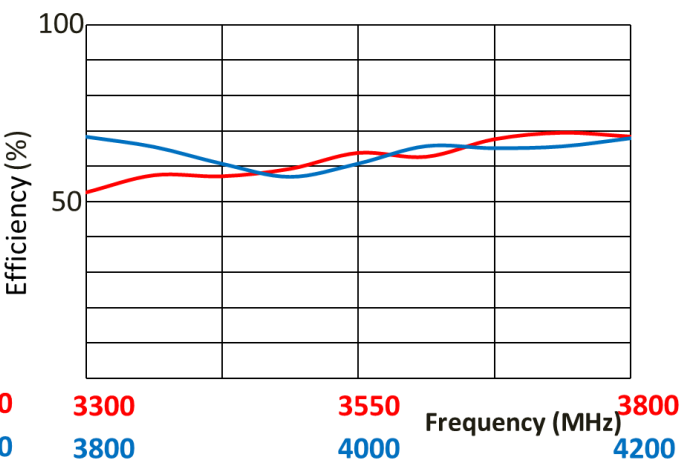
Return Loss



Peak Gain



Efficiency

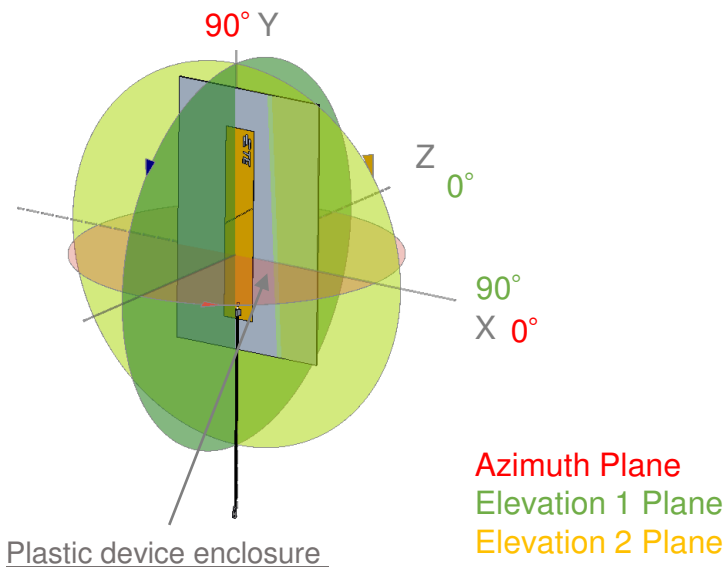


Data measured in free space and on 150 x 150 x 1.8 mm PC plastic

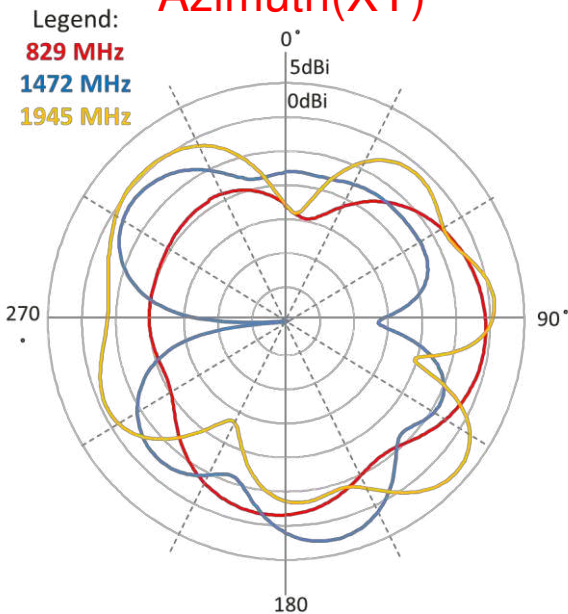
RADIATION PATTERN

(Shown as L000486-2 : Others can vary with different cable lengths.)

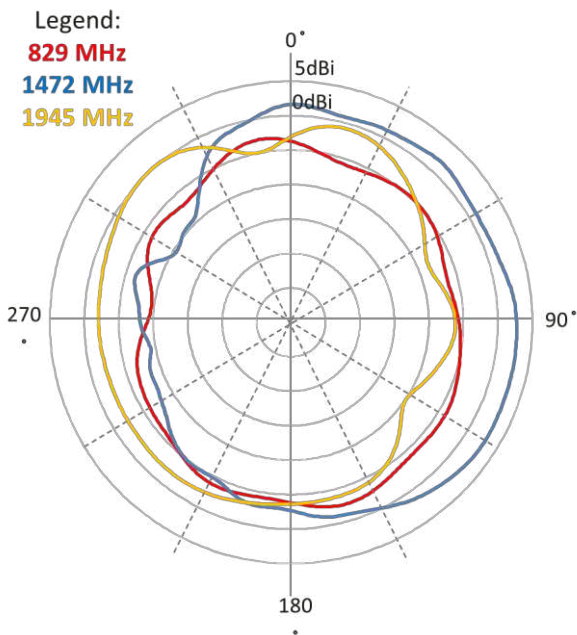
Test setup



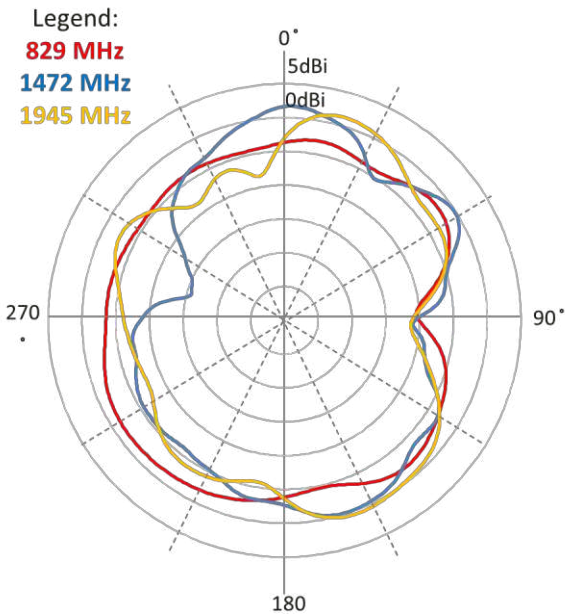
Azimuth(XY)



Elevation 1(XZ)



Elevation 2(YZ)

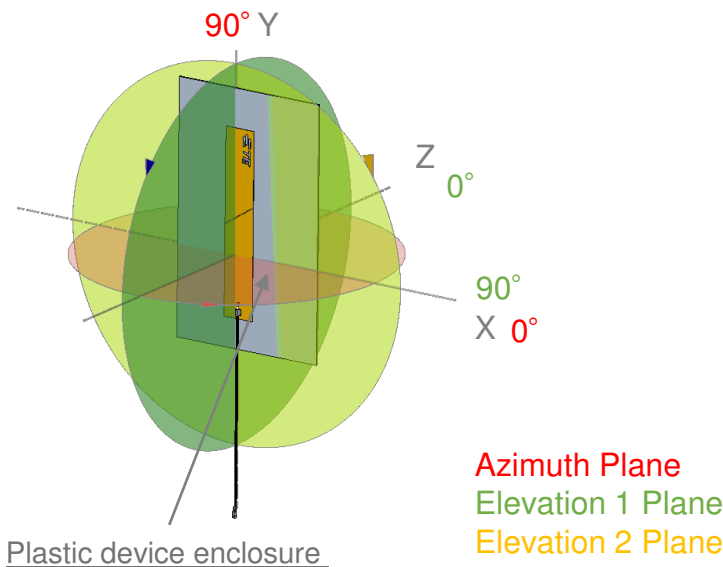


Data measured in free space and on 150 x 150 x 1.8 mm PC plastic

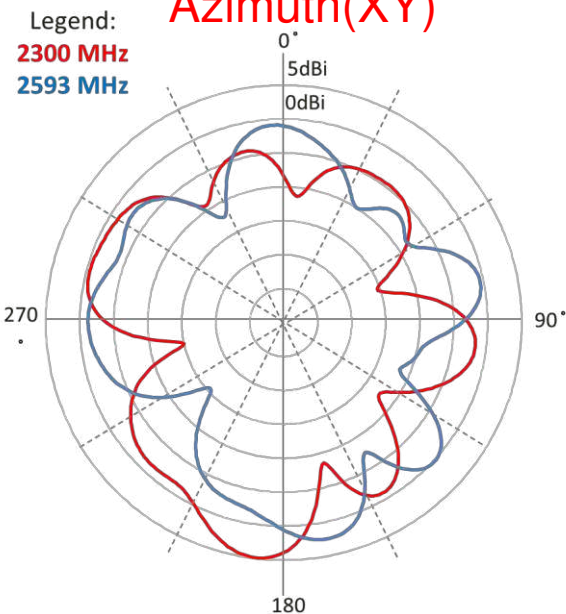
RADIATION PATTERN

(Shown as L000486-2 : Others can vary with different cable lengths.)

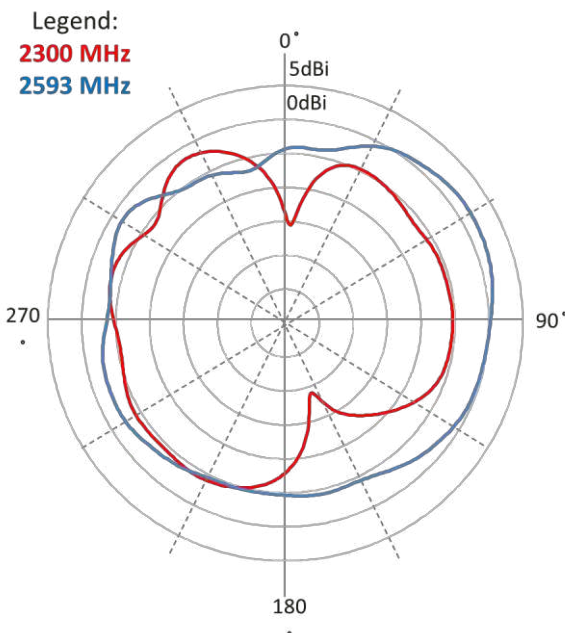
Test setup



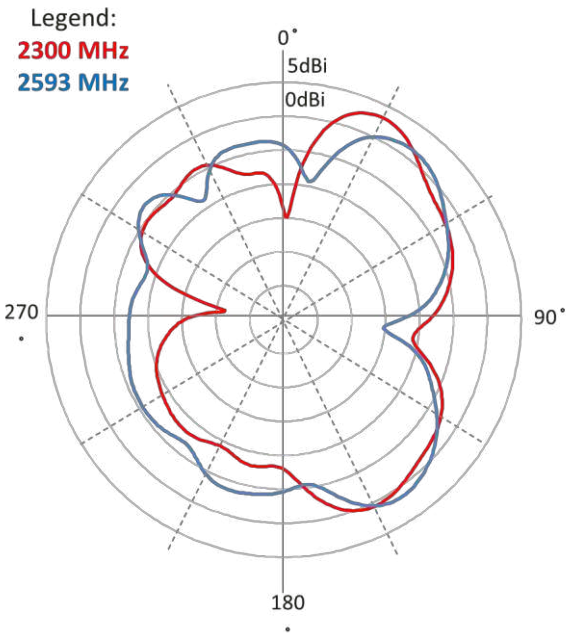
Azimuth(XY)



Elevation 1(XZ)

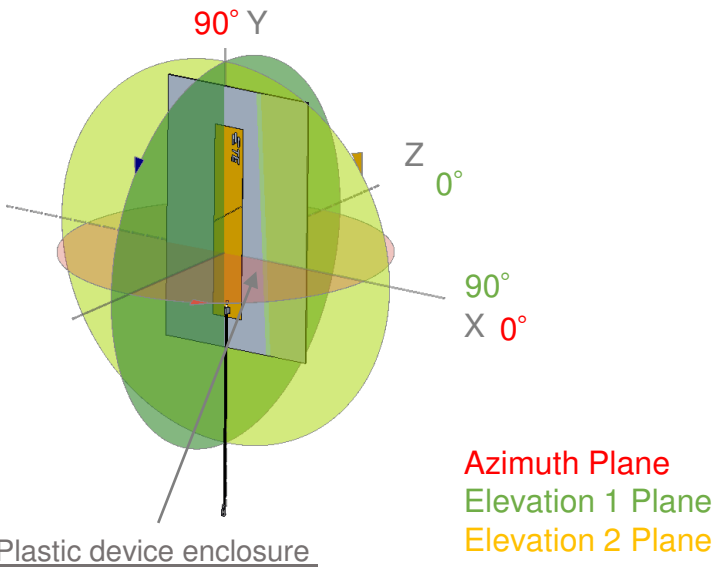


Elevation 2(YZ)

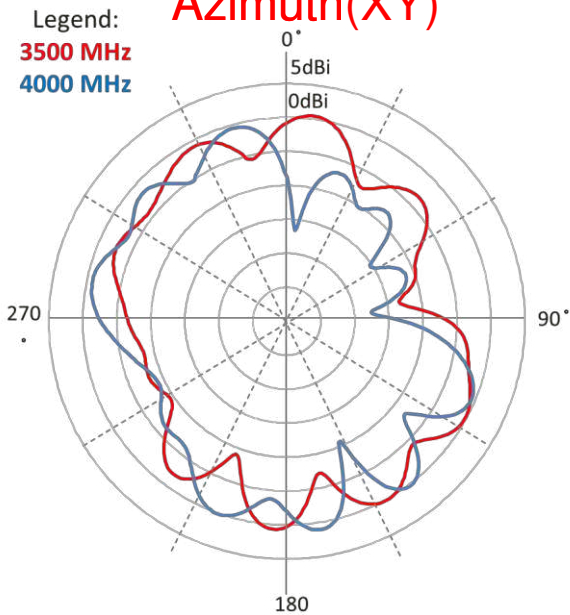


Data measured in free space and on 150 x 150 x 1.8 mm PC plastic

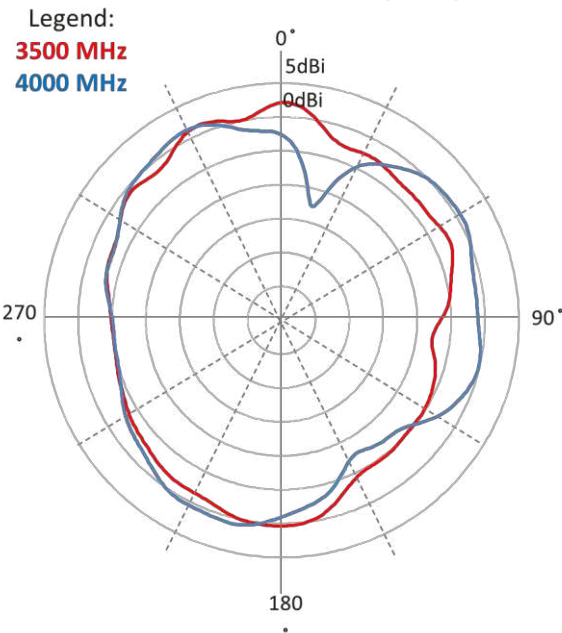
Test setup



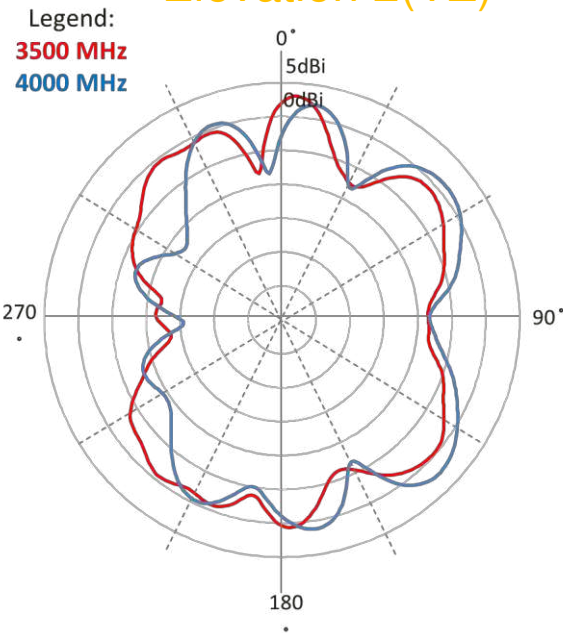
Azimuth(XY)



Elevation 1(XZ)

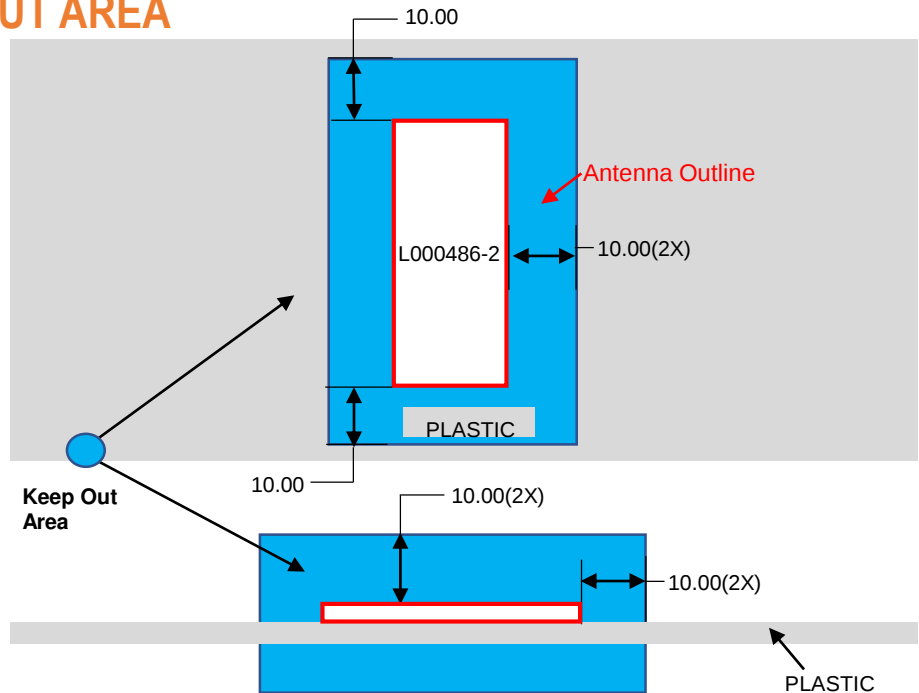


Elevation 2(YZ)



Data measured in free space and on 150 x 150 x 1.8 mm PC plastic

KEEP OUT AREA

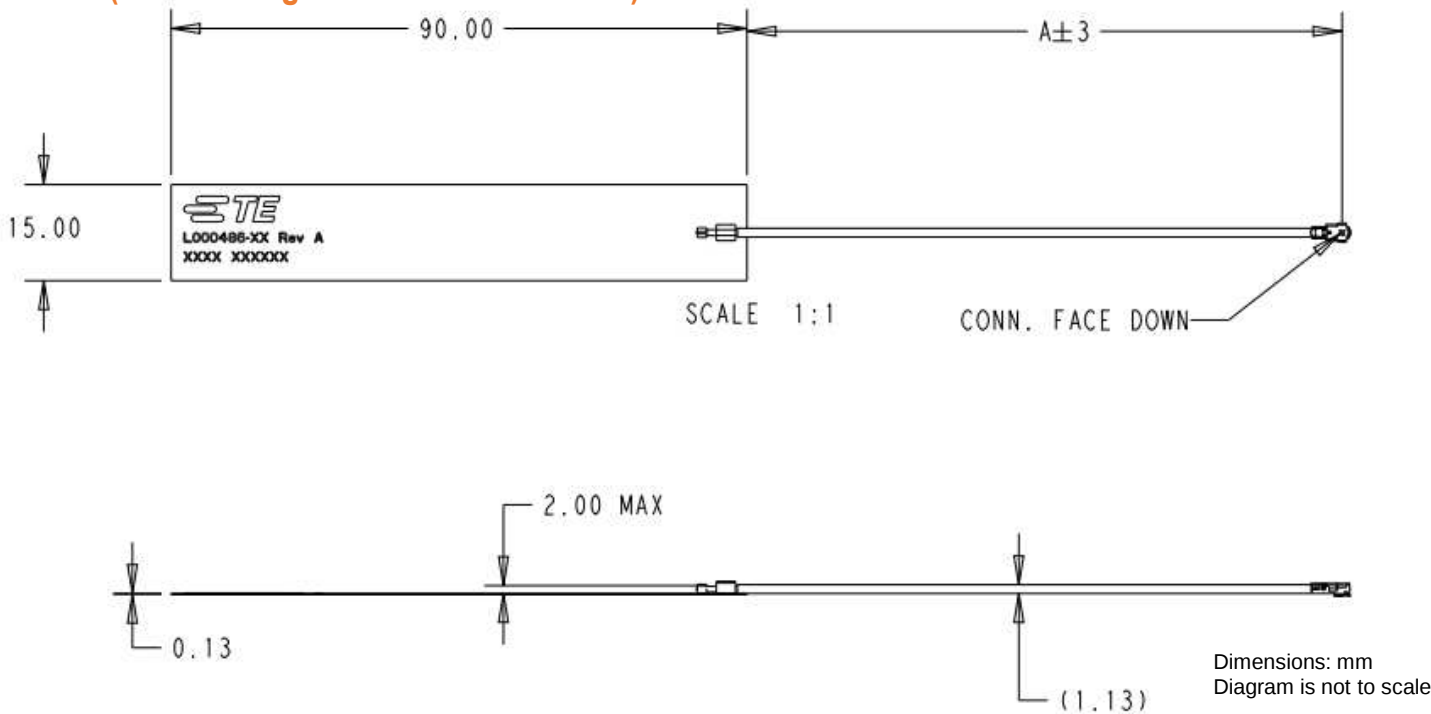


NOTES:1. Antenna designed to be mounted on plastic cover.
2. Area in blue above indicates Keep Out Area.
3. For more information please call TE.

Dimensions: mm
Diagram is not to scale

DIMENSIONS

(Refer to Page11 for dimension "A")

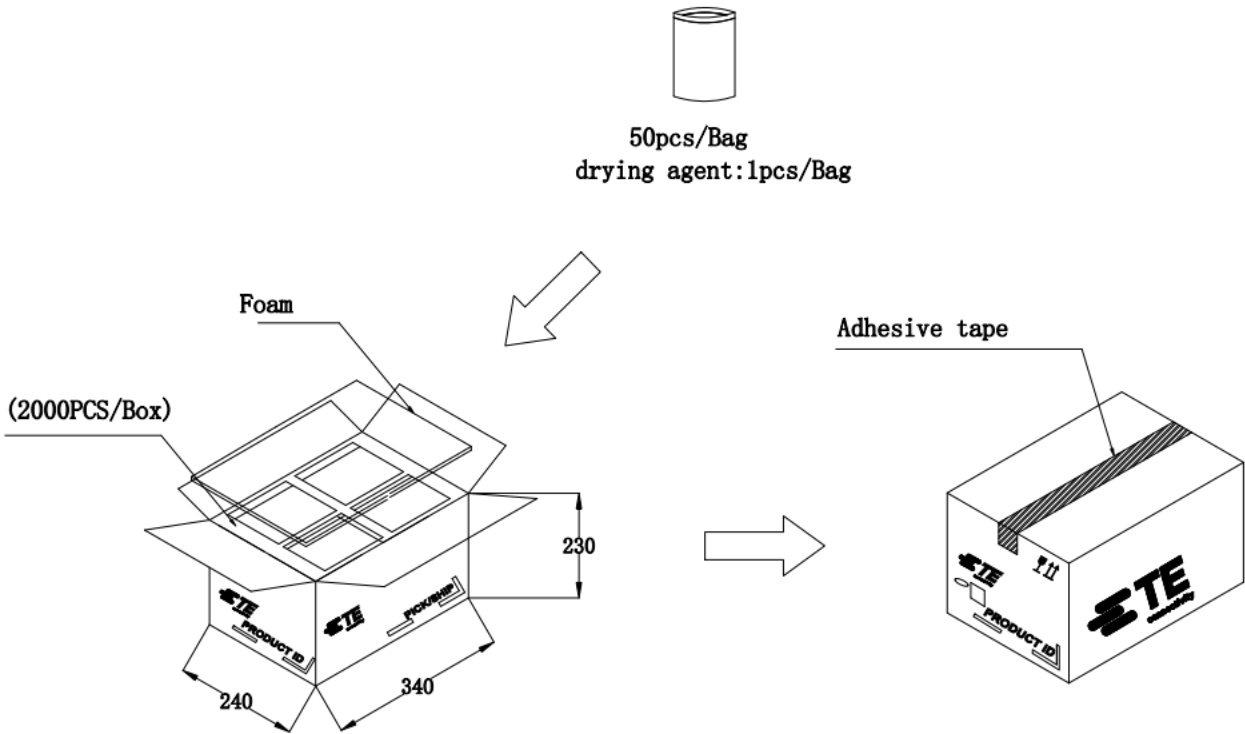


Dimensions: mm
Diagram is not to scale

MATING COMPONENTS TO PART NUMBERS AND DIMENSIONS

L000486-1	50	1.97	1.13	MHF-TYPE PLUG	RECEPTACLE (TE PN: 2337019-1)	
L000486-2	100	3.94	1.13	MHF-TYPE PLUG	RECEPTACLE (TE PN: 2337019-1)	
L000486-3	150	5.91	1.13	MHF-TYPE PLUG	RECEPTACLE (TE PN: 2337019-1)	
L000486-4	200	7.78	1.13	MHF-TYPE PLUG	RECEPTACLE (TE PN: 2337019-1)	
L000486-5	50	1.97	1.13	MHF4L-TYPE PLUG	RECEPTACLE (TE PN: 2334884-1)	
L000486-6	100	3.94	1.13	MHF4L-TYPE PLUG	RECEPTACLE (TE PN: 2334884-1)	
L000486-7	150	5.91	1.13	MHF4L-TYPE PLUG	RECEPTACLE (TE PN: 2334884-1)	
L000486-8	200	7.78	1.13	MHF4L-TYPE PLUG	RECEPTACLE (TE PN: 2334884-1)	
PART	MM	INCH	CABLE O.D, MM	CONNECTOR TYPE	PART NUMBER	IMAGE
NUMBER	CABLE LENGTH(A)			(ON CABLE)	MATING COMPONENTS	

PACKAGING





TE TECHNICAL SUPPORT CENTER

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