



ISM 868 MHz ANTENNA

FEATURES & BENEFITS

- 868 MHz ISM antenna for LoRaWAN and other IoT products
- Available cable lengths: 50, 100, 150 mm
- Available connectors: MHF-type, MHFL4-type
- FPC with double side adhesive tape simplifies mounting within the device even on curved areas
- Omnidirectional coverage

MATING COMPONENTS TO PART NUMBERS AND DIMENSIONS

PART NUMBER	CABLE LENGTH (A)		CONNECTOR TYPE (ON CABLE)
	MM	INCH	
L000558-01	50	1.97	MHF-TYPE PLUG
L000558-02	100	3.93	MHF-TYPE PLUG
L000558-03	150	5.90	MHF-TYPE PLUG
L000558-04	50	1.97	MHF4L-TYPE PLUG
L000558-05	100	3.93	MHF4L-TYPE PLUG
L000558-06	150	5.90	MHF4L-TYPE PLUG

SPECIFICATIONS

(Shown with 100 mm cable, Others can vary with different cable)

Frequency Range (MHz)	863-870 MHz
VSWR	< 1.5:1
Average Efficiency	46 %
Peak Gain	1.0 dBi
Average Gain	-3.4 dBi
Power Handling	10 Watt cw
Feed Point Impedance	50 ohms
Polarization	Linear
Size	35 mm x 9.2 mm x 2 mm
Weight	< 1 g
Mounting	Adhesive
Mating Connectors	MHF1 and MHF4 type, Refer to page 7
Cable	1.13mm Dia.
Operating / 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 / Cable OD 1.13 mm	RF DATA	Frequency Range (MHz)
		863 - 870
50 mm	VSWR	< 2.0:1
	Average Efficiency	46 %
	Peak Gain (Max)	1.1 dBi
	Average Gain	-3.4 dBi
100 mm	VSWR	< 1.5:1
	Average Efficiency	46%
	Peak Gain (Max)	1.0 dBi
	Average Gain	-3.4 dBi
150 mm	VSWR	< 2.0:1
	Average Efficiency	44 %
	Peak Gain (Max)	0.8 dBi
	Average Gain	-3.6 dBi

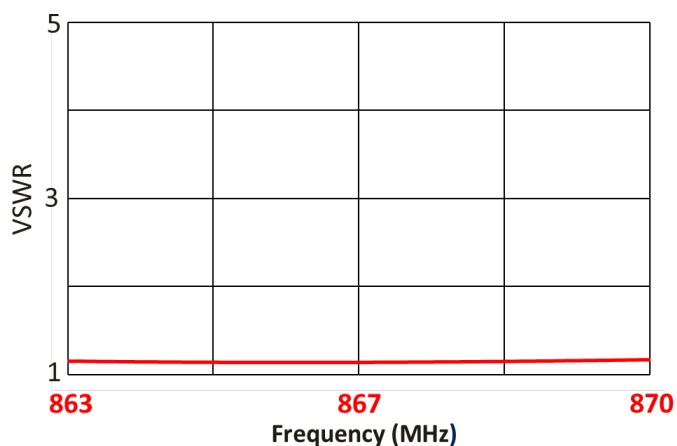
CABLE LOSS

OD 1.13mm (P/N: L000558-01-06)	
Freq. Range (MHz)	863 - 870
Cable attenuation (dB/m)	< 0.33

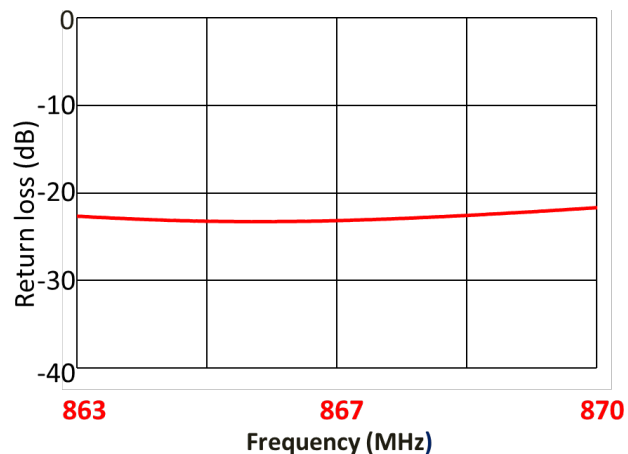
RF DATA

(Shown with 100 mm cable: Others vary with different cable lengths.)

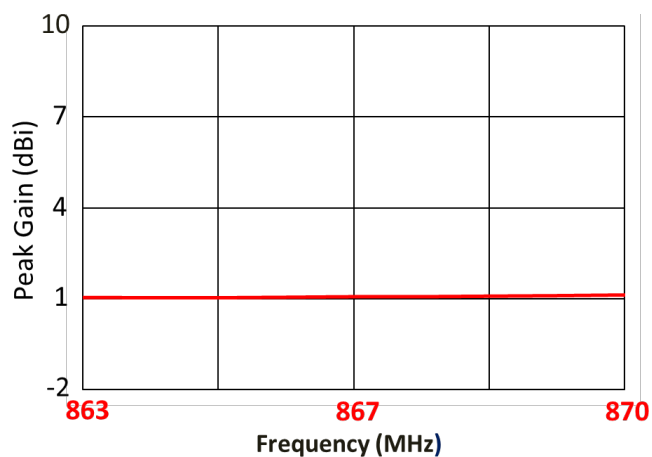
VSWR



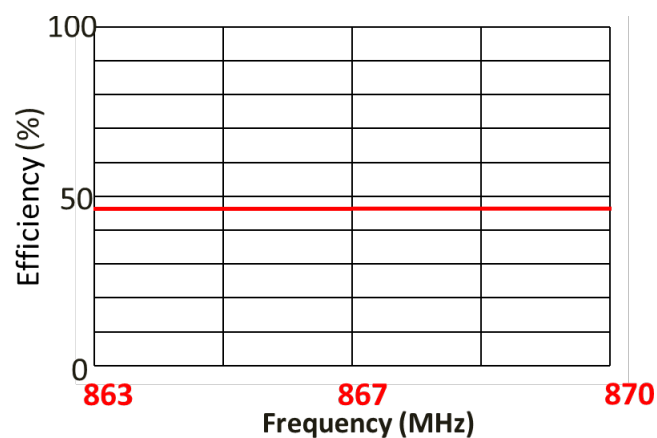
Return Loss



Peak Gain



Efficiency

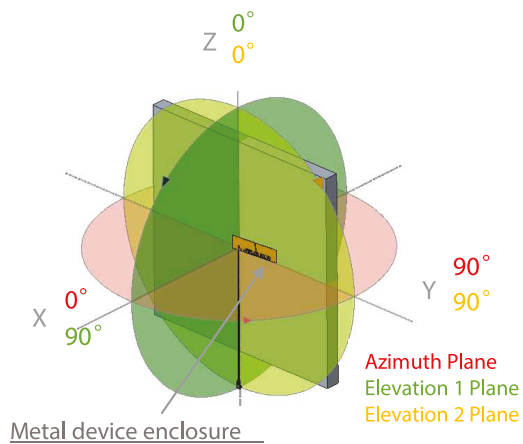


Data measured in free space and on 1.8 mm thick PC plastic

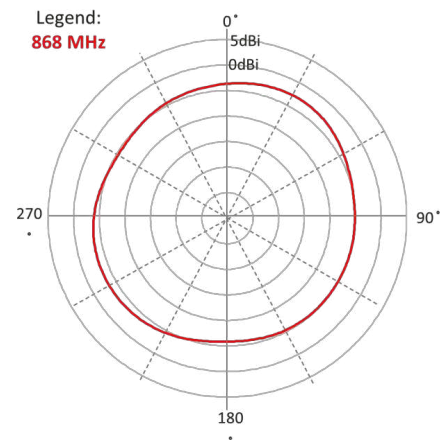
RADIATION PATTERN

(Shown with 100 mm cable: Others vary with different cable lengths.)

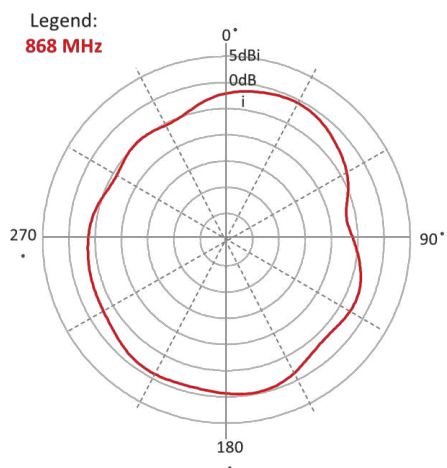
Test setup



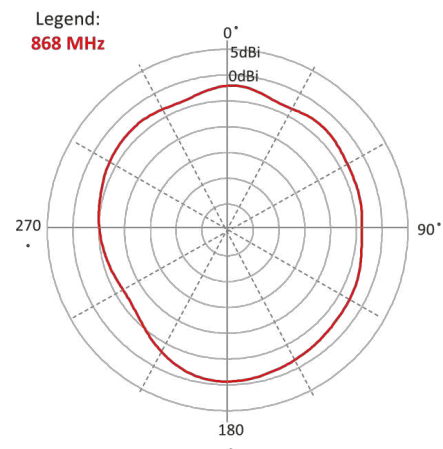
Azimuth



Elevation 1

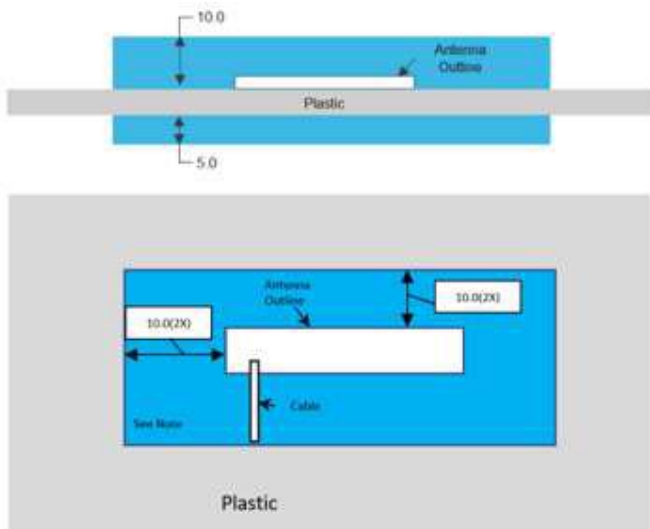


Elevation 2



Data measured in free space and on 1.8 mm thick PC plastic

KEEP OUT AREA



NOTES

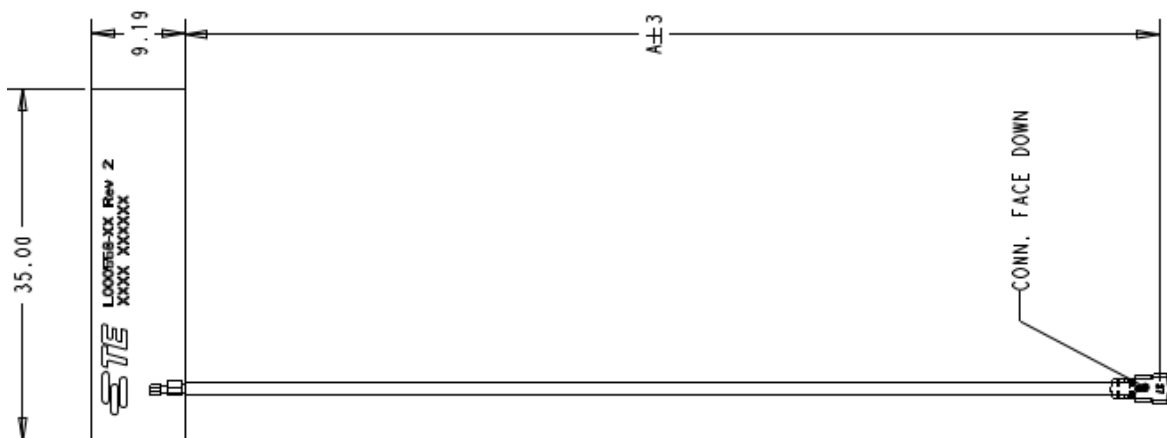
1. Antenna designed to be mounted on plastic cover.
2. Area in blue indicates Keep Out Area
3. Contact TE if Keep Out Area cannot be guaranteed.

Dimension: mm

Diagrams is not into scale

DIMENSIONS

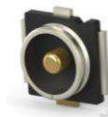
(Refer to Page 6 for dimension “A”)



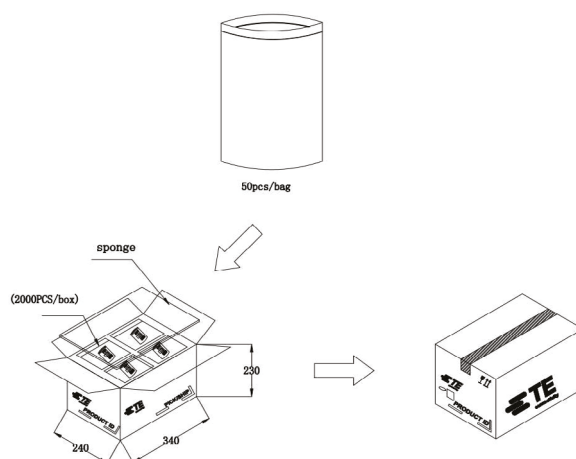
Dimension: mm

Diagrams is not into scale

MATING COMPONENTS TO PART NUMBERS AND DIMENSIONS

PART NUMBER	CABLE LENGTH (A)		CABLE O.D MM	CONNECTOR TYPE (ON CABLE)	MATING COMPONENTS	
	MM	INCH			PART NUMBER	IMAGE
L000558-01	50	1.97	1.13	MHF-TYPE PLUG	RECEPTACLE (TE PN: 2337019-1)	
L000558-02	100	3.93	1.13	MHF-TYPE PLUG	RECEPTACLE (TE PN: 2337019-1)	
L000558-03	150	5.90	1.13	MHF-TYPE PLUG	RECEPTACLE (TE PN: 2337019-1)	
L000558-04	50	1.97	1.13	MHF4L-TYPE PLUG	RECEPTACLE (TE PN: 2334884-1)	
L000558-05	100	3.93	1.13	MHF4L-TYPE PLUG	RECEPTACLE (TE PN: 2334884-1)	
L000558-06	150	5.90	1.13	MHF4L-TYPE PLUG	RECEPTACLE (TE PN: 2334884-1)	

PACKAGING



TE TECHNICAL SUPPORT CENTER

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