



## 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

## ISM 868 MHz ANTENNA

Standard Antenna Solutions

### SPECIFICATIONS

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

<b>Frequency Range (MHz)</b>	863-870 MHz
<b>VSWR</b>	< 1.5:1
<b>Average Efficiency</b>	46 %
<b>Peak Gain</b>	1.0 dBi
<b>Average Gain</b>	-3.4 dBi
<b>Power Handling</b>	10 Watt cw
<b>Feed Point Impedance</b>	50 ohms
<b>Polarization</b>	Linear
<b>Size</b>	35 mm x 9.2 mm x 2 mm
<b>Weight</b>	< 1 g
<b>Mounting</b>	Adhesive
<b>Mating Connectors</b>	MHF1 and MHF4 type, Refer to page 7
<b>Cable</b>	1.13mm Dia.
<b>Operating / Storage Temperature</b>	-40 to +85°C
<b>Hazardous Materials</b>	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

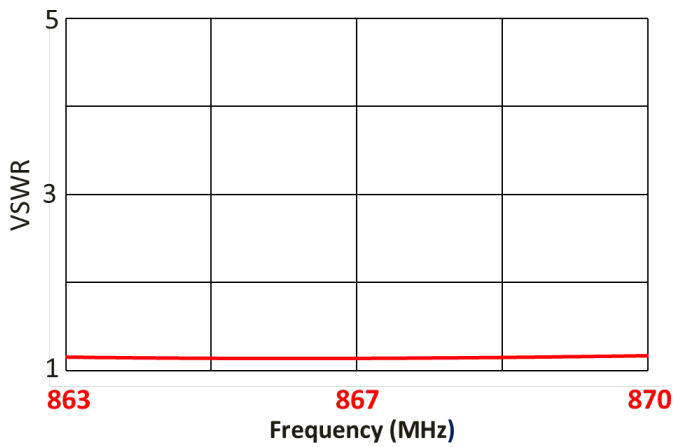
### CABLE LOSS

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

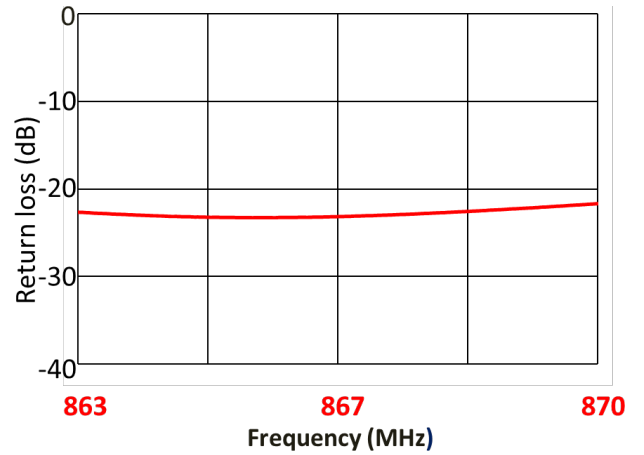
RF DATA

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

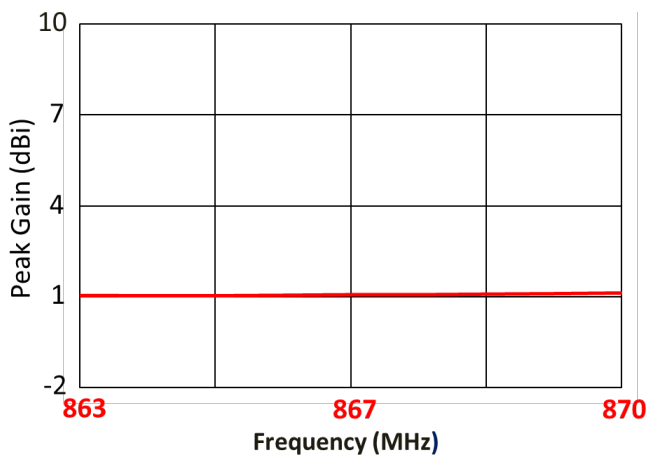
VSWR



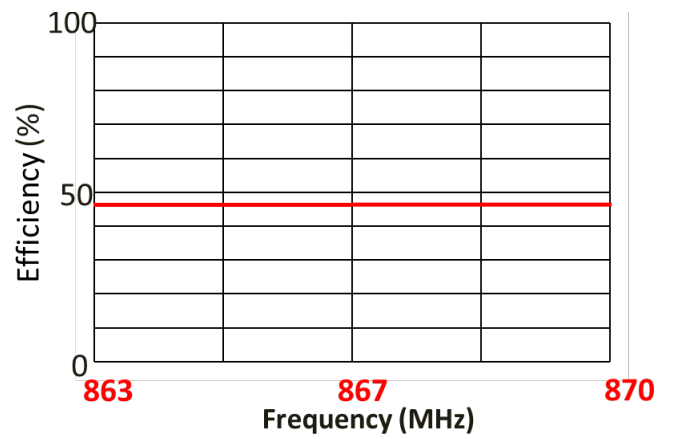
Return Loss



Peak Gain



Efficiency

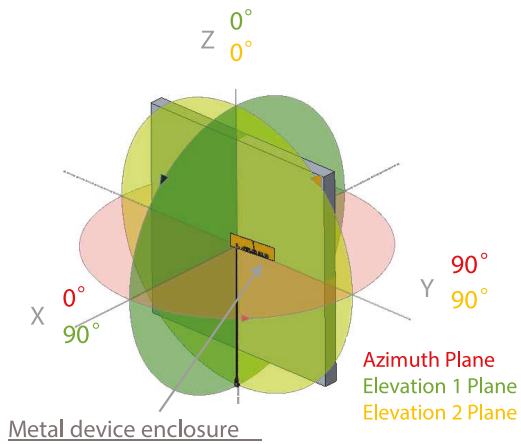


Data measured in free space and on 1.8 mm thick PC plastic

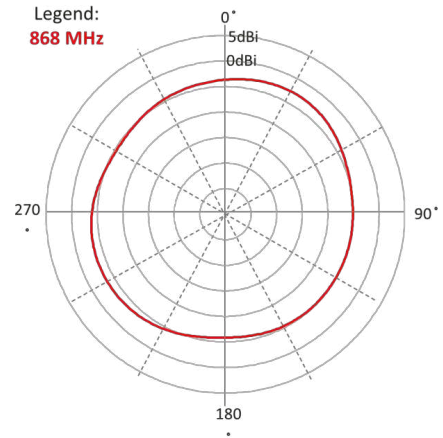
**RADIATION PATTERN**

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

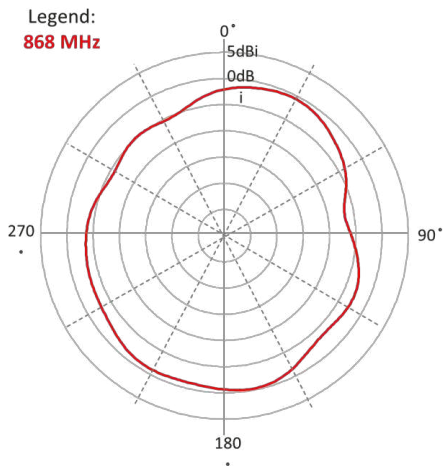
**Test setup**



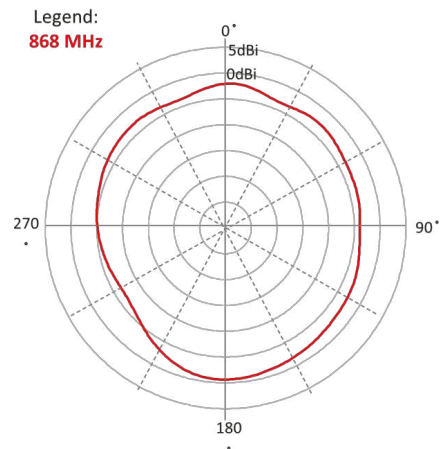
**Azimuth**



**Elevation 1**

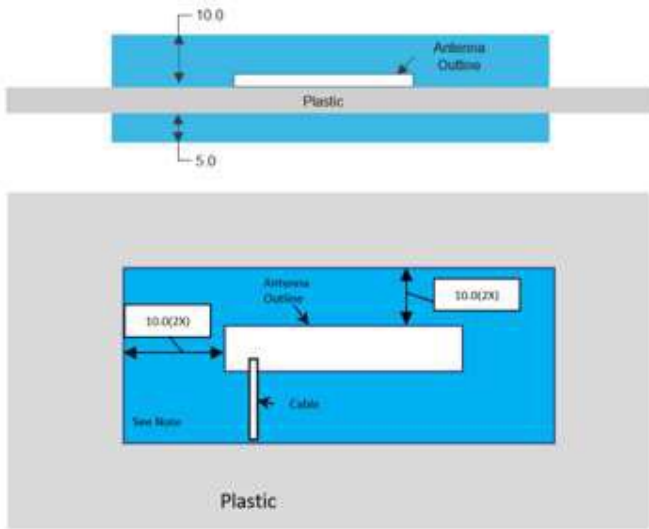


**Elevation 2**



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

**KEEP OUT AREA**



**NOTES**

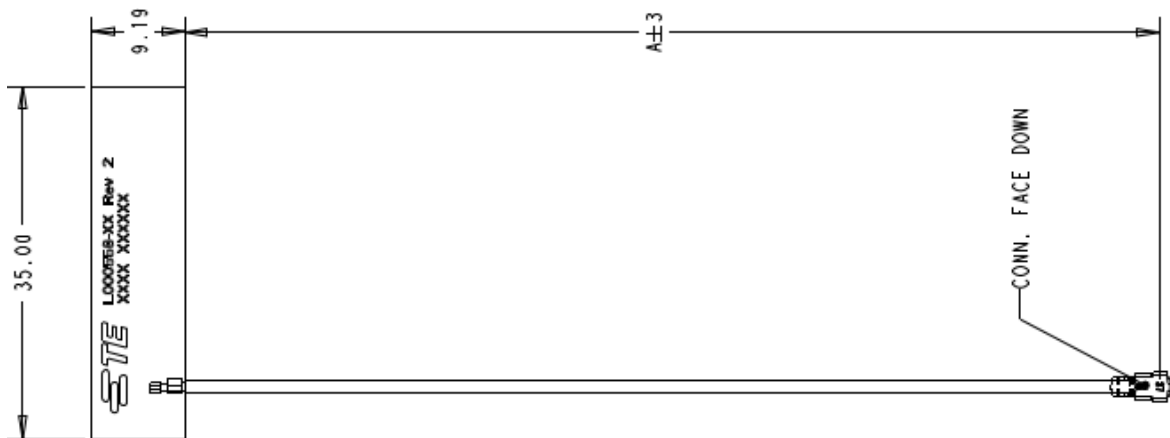
- 1. Antenna designed to be mounted on plastic cover.
- 2. Area in blue indicates Keep Out Area
- 3. Contact TE if Keep Out Area cannot be guaranteed.

Dimension: mm

Diagrams is not into scale

**DIMENSIONS**


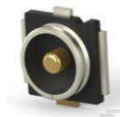
(Refer to Page 6 for dimension "A")



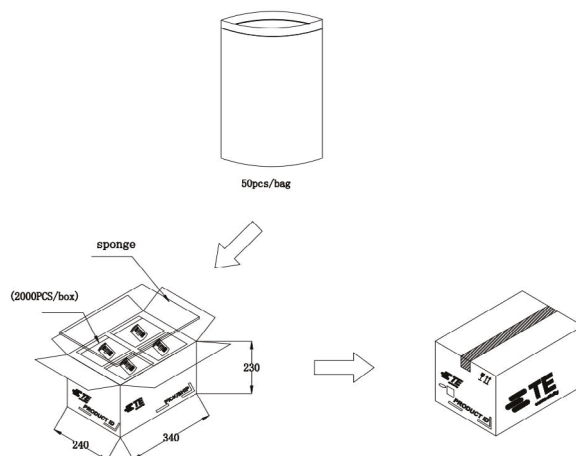
Dimension: mm

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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UK:	+44 (0) 800-267666
France:	+33 (0) 1-3420-8686
Netherlands:	+31 (0) 73-6246-999
China:	+86 (0) 400-820-6015

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