



ISM 868 MHz VDP LPWAN FPC ANTENNAS

FEATURES & BENEFITS

- 868 MHz ISM antenna for LoRaWAN and other IoT products
- For use in Americas regions
- 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	
L000551-01	50	1.97	MHF-TYPE PLUG
L000551-02	100	3.93	MHF-TYPE PLUG
L000551-03	150	5.90	MHF-TYPE PLUG
L000551-04	50	1.97	MHF4L-TYPE PLUG
L000551-05	100	3.93	MHF4L-TYPE PLUG
L000551-06	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	2.2 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 6
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)	2.2 dBi
	Average Gain	-3.4 dBi
100 mm	VSWR	< .15:1
	Average Efficiency	46%
	Peak Gain (Max)	2.2 dBi
	Average Gain	-3.4 dBi
150 mm	VSWR	< 2.0:1
	Average Efficiency	44 %
	Peak Gain (Max)	2.0 dBi
	Average Gain	-3.6 dBi

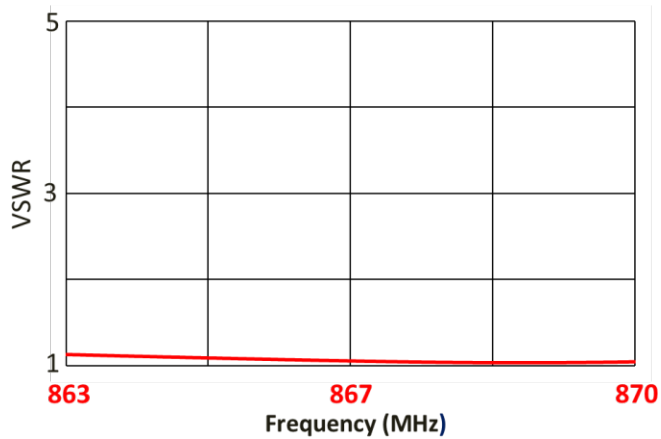
CABLE LOSS

OD 1.13mm (P/N: L000551-01-06)	
Freq. Range (MHz)	863 - 870
Cable attenuation (dB/m)	< 0.33

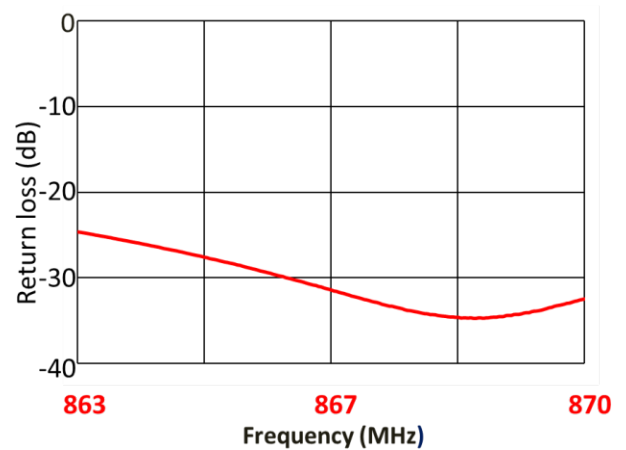
RF DATA

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

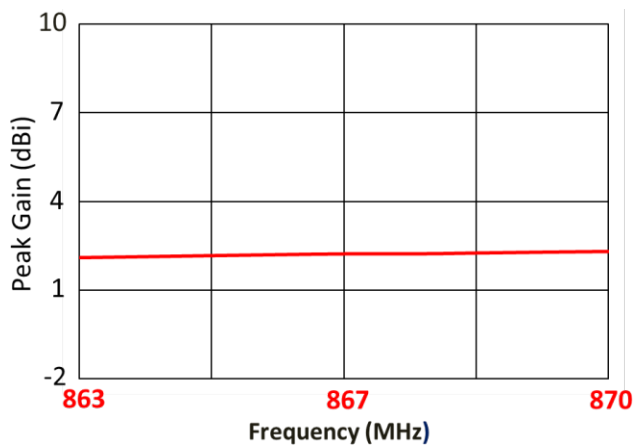
VSWR



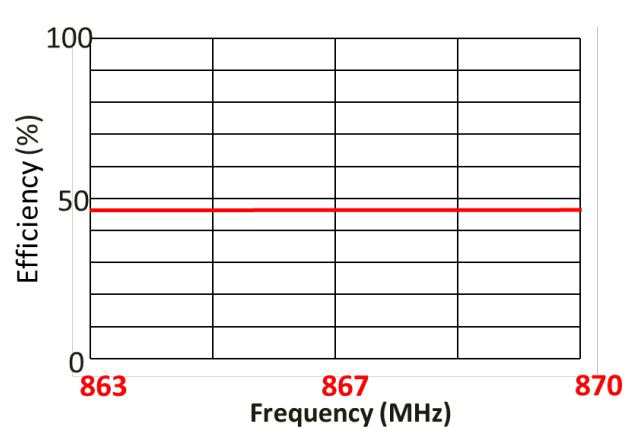
Return Loss



Peak Gain



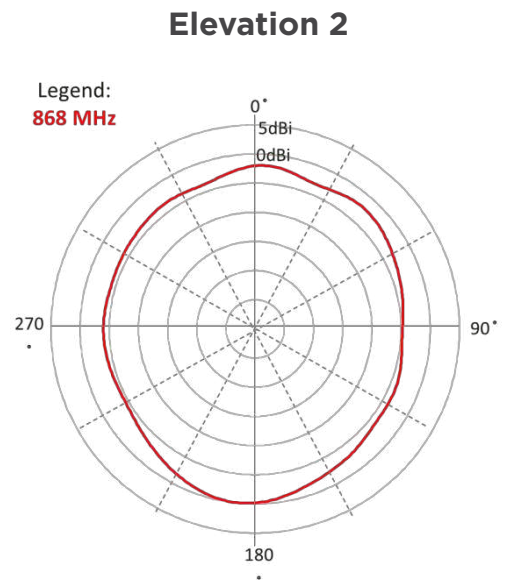
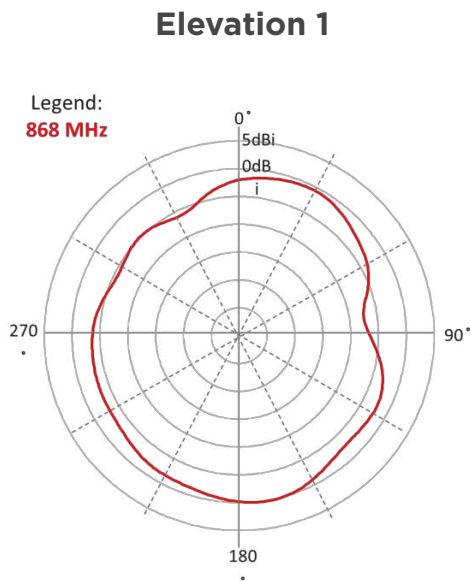
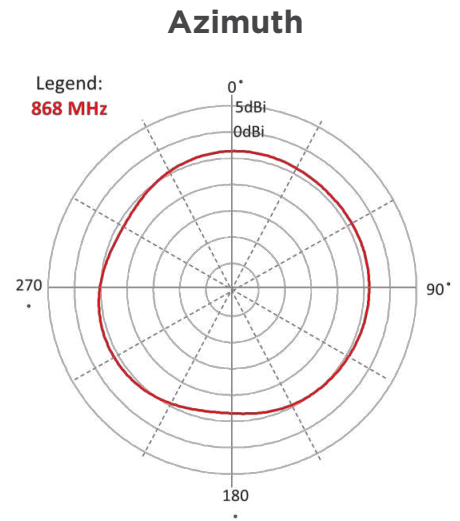
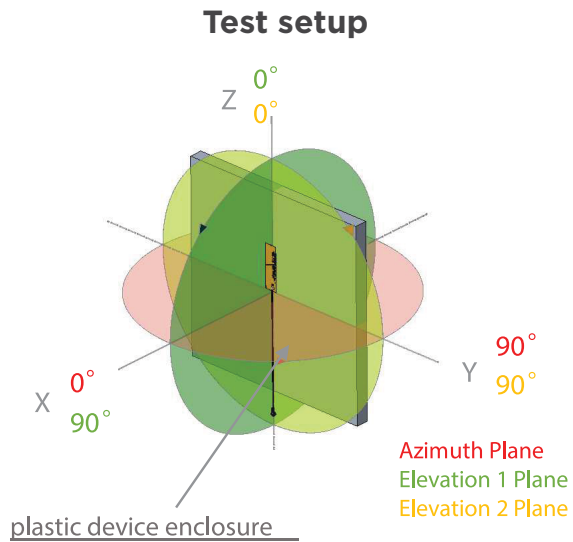
Efficiency



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

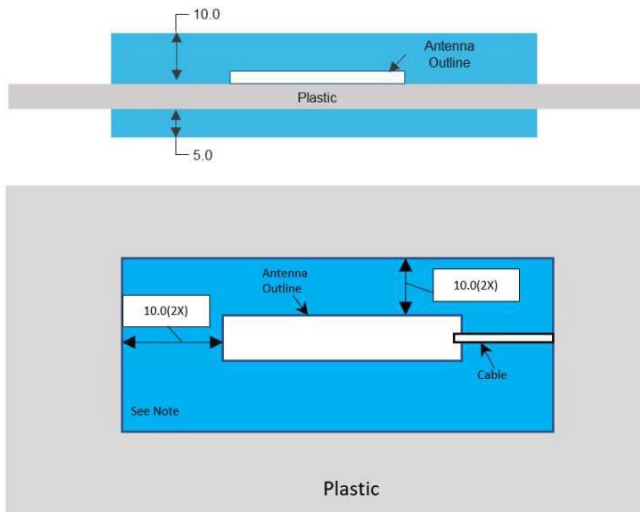
RADIATION PATTERN

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



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

KEEP OUT AREA



NOTES

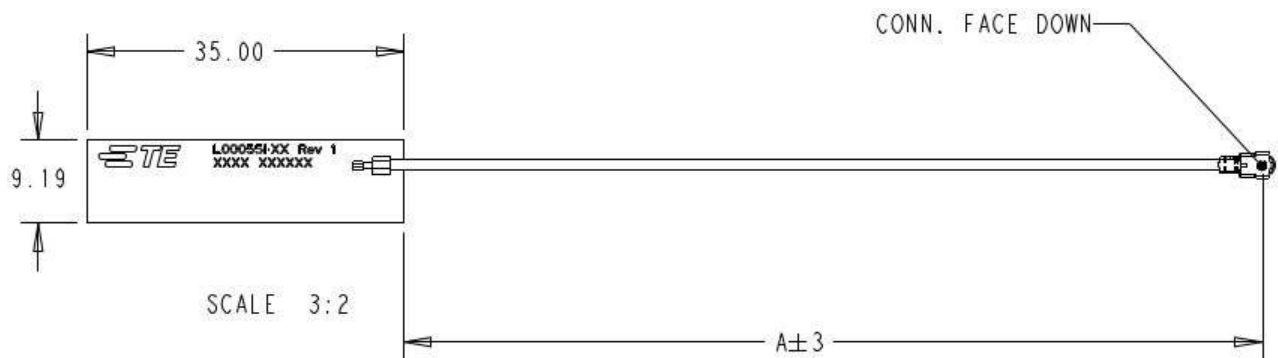
1. Antenna designed to be mounted on plastic cover.
2. Area in blue indicates Keep Out Area
3. Contact TE if Keep Out Area cannot be guaranteed.

Dimension: mm

Diagrams is not into scale

DIMENSIONS



(Refer to Page 6 for dimension “A”)



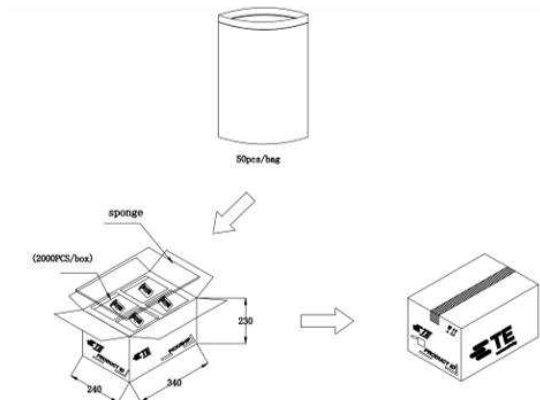
Dimension: mm

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
L000551-01	50	1.97	1.13	MHF-TYPE PLUG	RECEPTACLE (TE PN: 2337019-1)	
L000551-02	100	3.93	1.13	MHF-TYPE PLUG	RECEPTACLE (TE PN: 2337019-1)	
L000551-03	150	5.90	1.13	MHF-TYPE PLUG	RECEPTACLE (TE PN: 2337019-1)	
L000551-04	50	1.97	1.13	MHF4L-TYPE PLUG	RECEPTACLE (TE PN: 2334884-1)	
L000551-05	100	3.93	1.13	MHF4L-TYPE PLUG	RECEPTACLE (TE PN: 2334884-1)	
L000551-06	150	5.90	1.13	MHF4L-TYPE PLUG	RECEPTACLE (TE PN: 2334884-1)	

PACKAGING



TE TECHNICAL SUPPORT CENTER

- USA: +1 (800) 522-6752
- Canada: +1 (905) 475-6222
- Mexico: +52 (0) 55-1106-0800
- Latin/S. America: +54 (0) 11-4733-2200
- Germany: +49 (0) 6251-133-1999
- UK: +44 (0) 800-267666
- France: +33 (0) 1-3420-8686
- Netherlands: +31 (0) 73-6246-999
- China: +86 (0) 400-820-6015

For phone numbers in other countries, go to te.com/support-center

te.com

TE, TE Connectivity and TE connectivity (logo) are trademarks owned or licensed by the TE Connectivity Ltd. family of companies. Other product names, logos, and company names mentioned herein may be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application. Antenna performance may vary. TE is a component manufacturer, and customer and/or end-user is responsible for all end-use compliance and regulatory requirements.

©2024 TE Connectivity. All Rights Reserved.

Published 08-24