



5900 – 8500 MHz UWB ANTENNA

Part Numbers: 2108965-X
(See page 8 for details)

FEATURES & BENEFITS

- UWB channel 5,6,7,8,9
- Adhesive backing on the FPC simplifies mounting within the device
- FPC antenna assembly
- Different cable length and connector options available

SPECIFICATIONS (Shown as 2108965-1 : Others can vary with different cable lengths.)

Frequency Range (MHz)	5900-8500
VSWR	< 2.1:1
Average Efficiency	78 %
Peak Gain	4.2 dBi
Average Gain	-1.1 dBi
Power Handling	10 Watt cw
Feed Point Impedance	50 ohms
Polarization	Linear
Size	15.6 mm x 18.6 mm x 0.15 mm
Weight	< 1.15 g
Mounting	Adhesive Tape
Mating Connectors	MHF and MHF4L type, Refer to page 8
Cable	1.13mm and 1.37mm Dia., Refer to page 8
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

P/N Cable Length/ Connector/ Cable OD	RF DATA	Frequency Range (MHz)
		5900-8500
2108965-1 50 mm MHF 1.37 mm	VSWR	< 2.1:1
	Average Efficiency	78 %
	Peak Gain (Max)	4.2 dBi
	Average Gain	-1.1 dBi
2108965-2 100 mm MHF 1.37 mm	VSWR	<2.1:1
	Average Efficiency	74 %
	Peak Gain (Max)	4.0 dBi
	Average Gain	-1.3 dBi
2108965-3 150 mm MHF 1.37 mm	VSWR	<2.0:1
	Average Efficiency	69 %
	Peak Gain (Max)	3.7 dBi
	Average Gain	-1.6 dBi
2108965-4 200 mm MHF 1.37 mm	VSWR	<2.0:1
	Average Efficiency	65 %
	Peak Gain (Max)	3.4 dBi
	Average Gain	-1.9 dBi

CABLE LOSS

OD 1.37mm (P/N: 3-2108965-x)	
Freq. Range (MHz)	5900-8500
Cable attenuation (dB/m)	< 5.6

Antenna RF Specifications with different cable assemblies

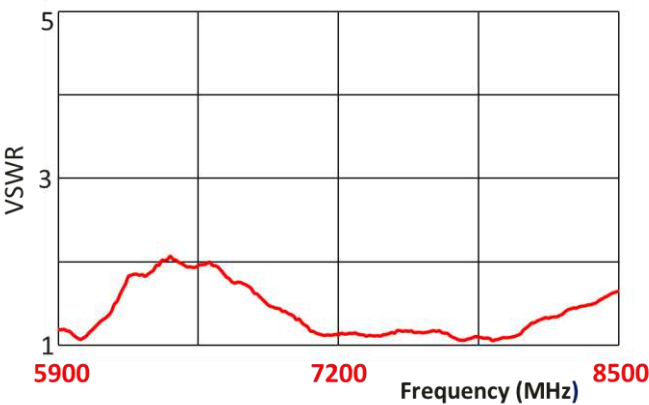
P/N Cable Length/ Connector/ Cable OD	RF DATA	Frequency Range (MHz)
		5900-8500
2108965-5 50 mm MHF4L 1.13 mm	VSWR	< 2.0:1
	Average Efficiency	77%
	Peak Gain (Max)	4.2 dBi
	Average Gain	-1.1 dBi
2108965-6 100 mm MHF4L 1.13 mm	VSWR	< 2.1:1
	Average Efficiency	71%
	Peak Gain (Max)	3.8 dBi
	Average Gain	-1.5 dBi
2108965-7 150 mm MHF4L 1.13 mm	VSWR	< 1.8:1
	Average Efficiency	66%
	Peak Gain (Max)	3.5 dBi
	Average Gain	-1.8 dBi
2108965-8 200 mm MHF4L 1.13 mm	VSWR	< 1.8:1
	Average Efficiency	61%
	Peak Gain (Max)	3.1 dBi
	Average Gain	-2.2 dBi

CABLE LOSS

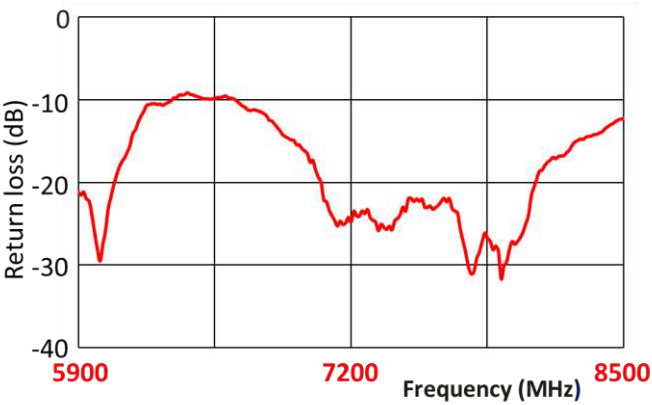
OD 1.13mm (P/N: 3-2108965-x)	
Freq. Range (MHz)	5900-8500
Cable attenuation (dB/m)	< 7.0

RF DATA (Shown as 2108965-1 : Others can vary with different cable lengths.)

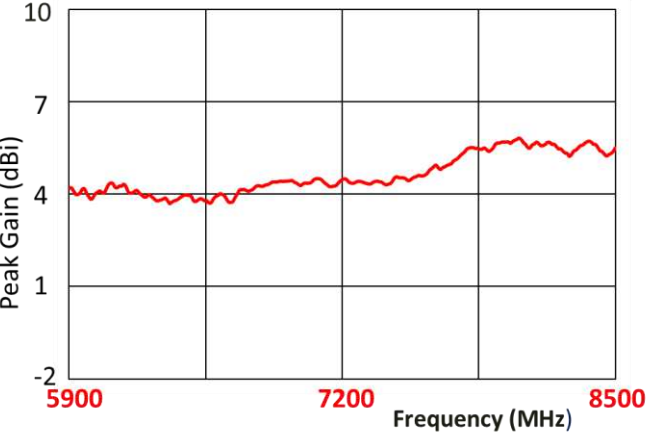
VSWR



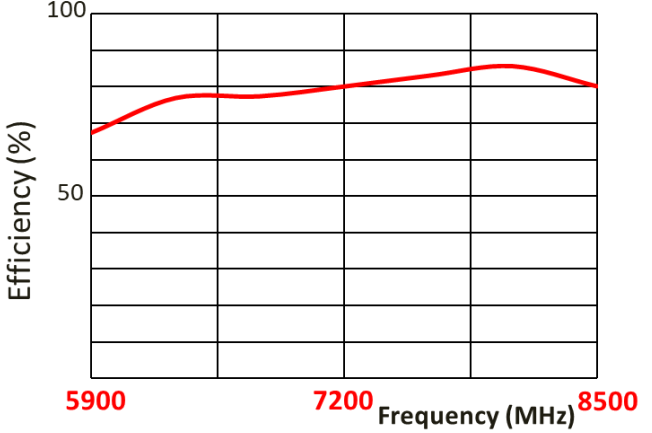
Return Loss



Peak Gain



Efficiency

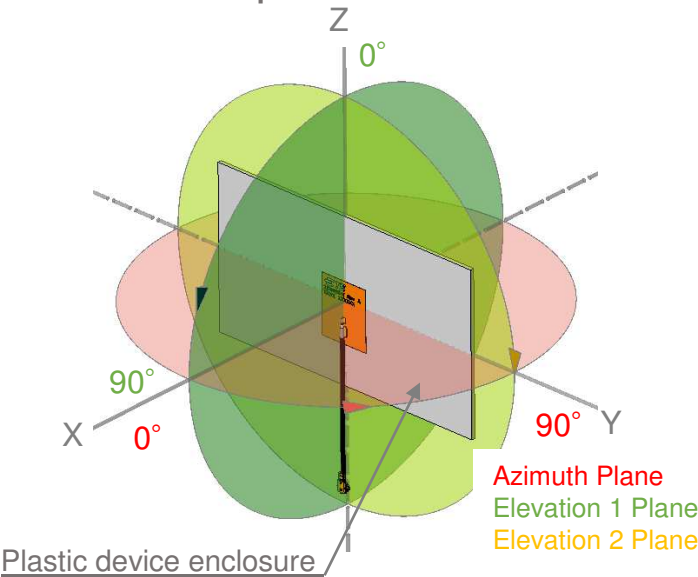


Data measured in free space and on 165 x 100 x 2 mm PC plastic

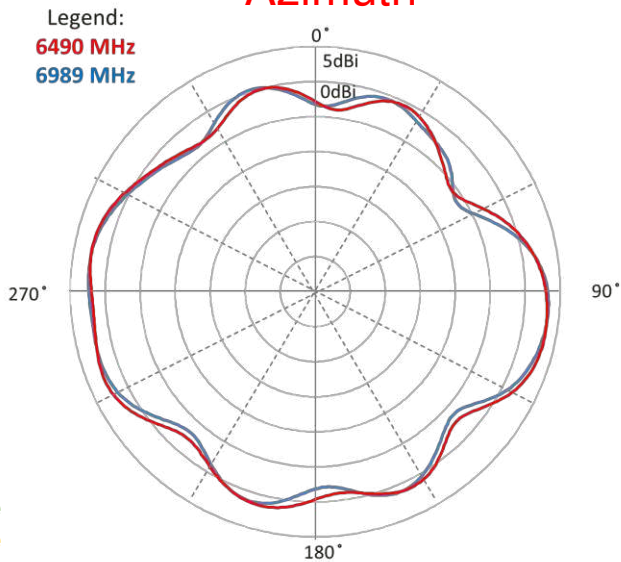
RADIATION PATTERN

(Shown as 2108965-1 : Others can vary with different cable lengths.)

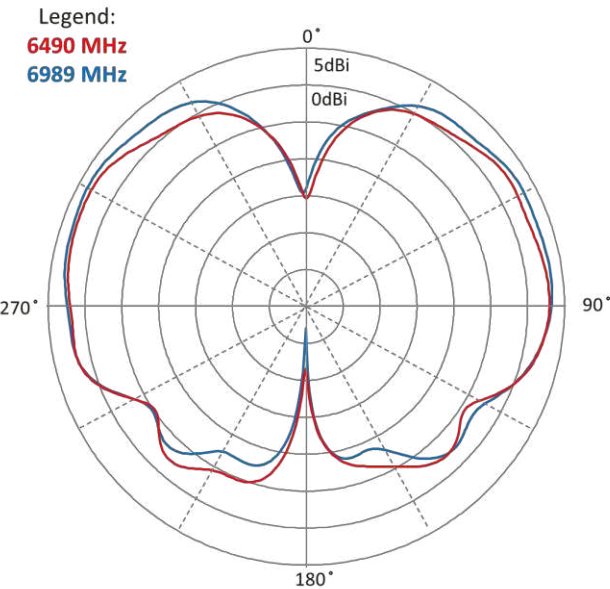
Test setup



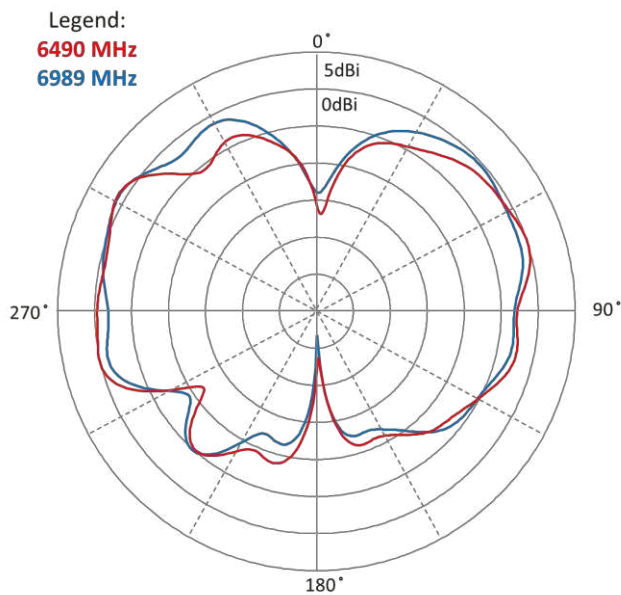
Azimuth



Elevation 1



Elevation 2

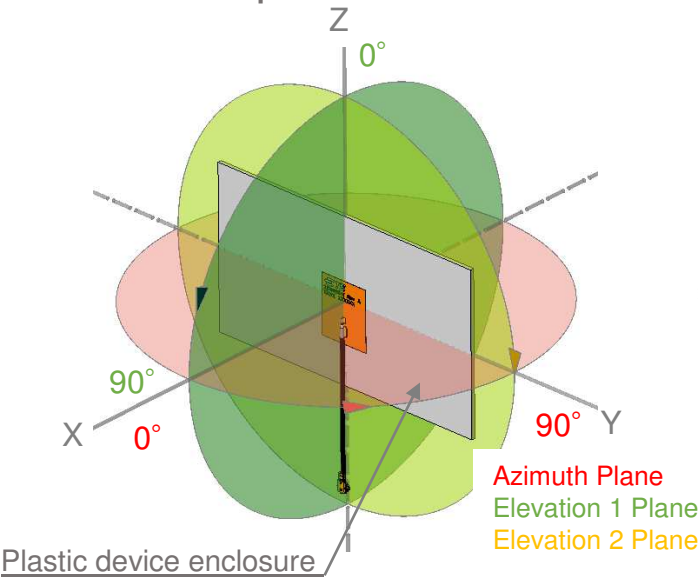


Data measured in free space and on 165 x 100 x 2 mm PC plastic

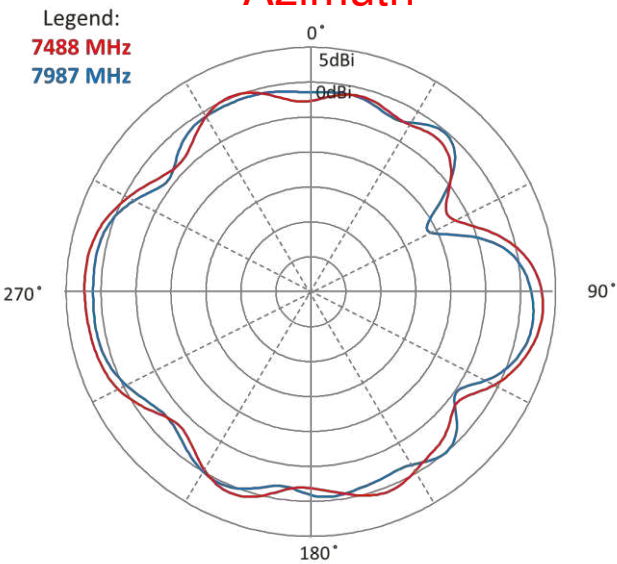
RADIATION PATTERN

(Shown as 2108965-1 : Others can vary with different cable lengths.)

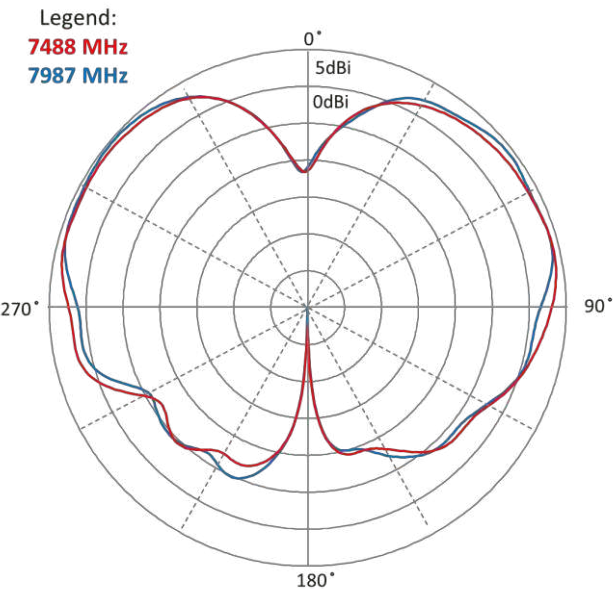
Test setup



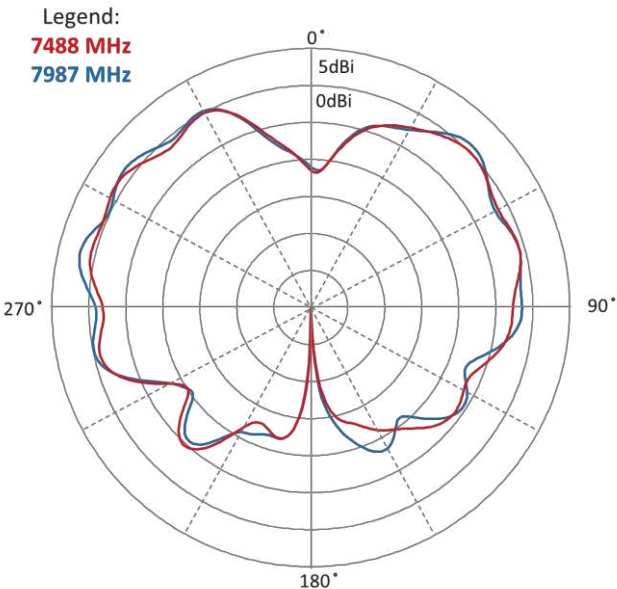
Azimuth



Elevation 1

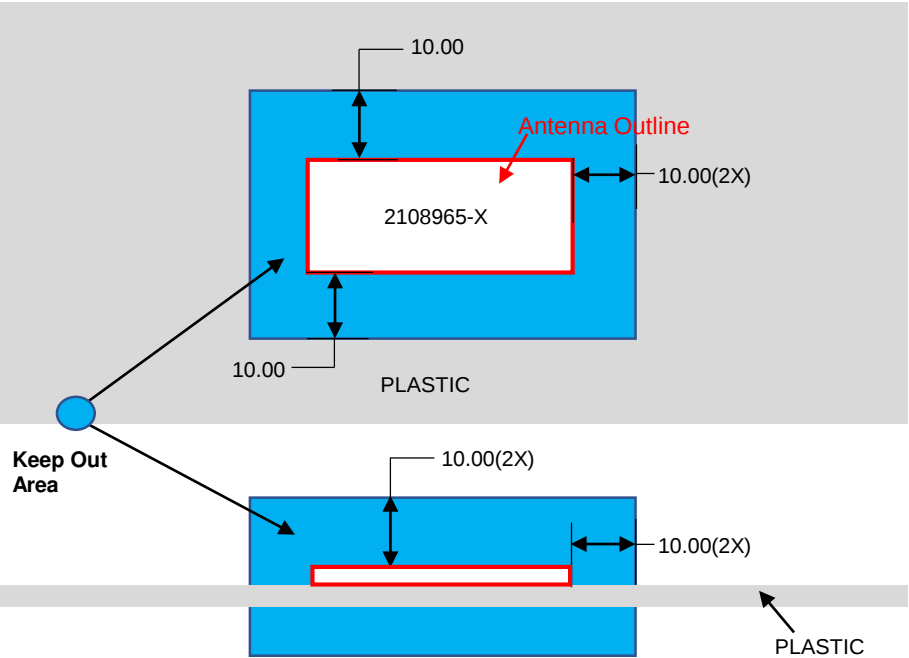


Elevation 2



Data measured in free space and on 165 x 100 x 2 mm PC plastic

KEEP OUT AREA

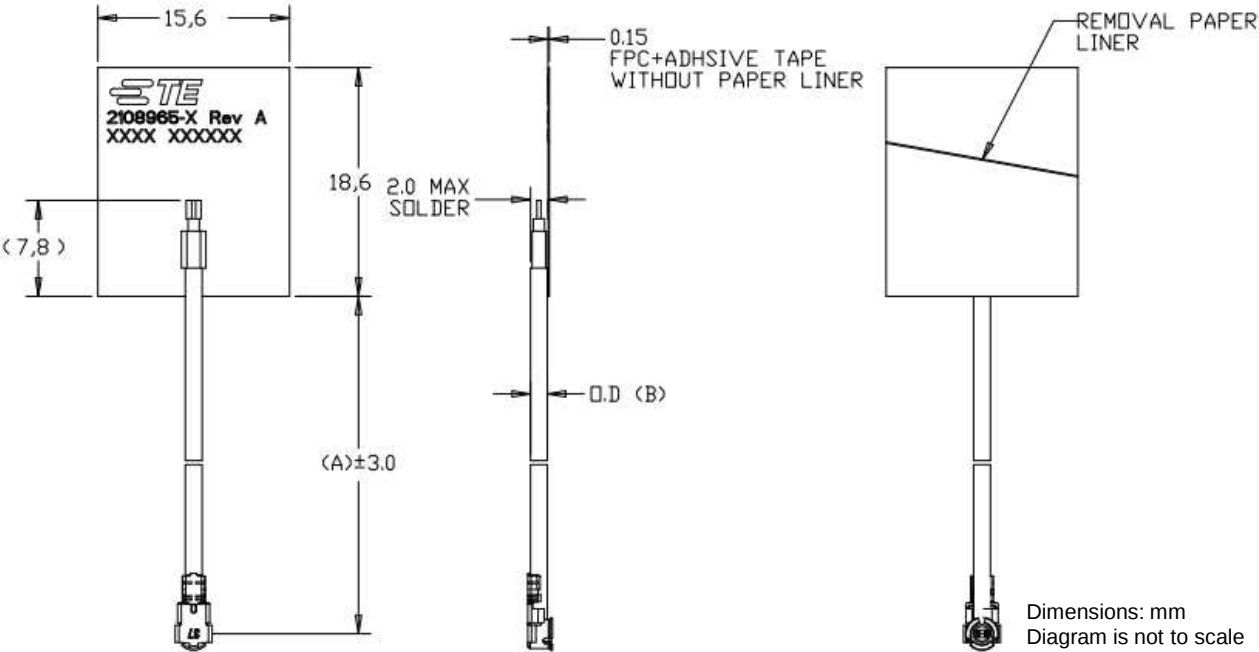


NOTES:1. Antenna designed to be mounted on plastic cover.
2. Area in blue above indicates Keep Out Area.
3. For more information please call TE.

Dimensions: mm
Diagram is not to scale

DIMENSIONS

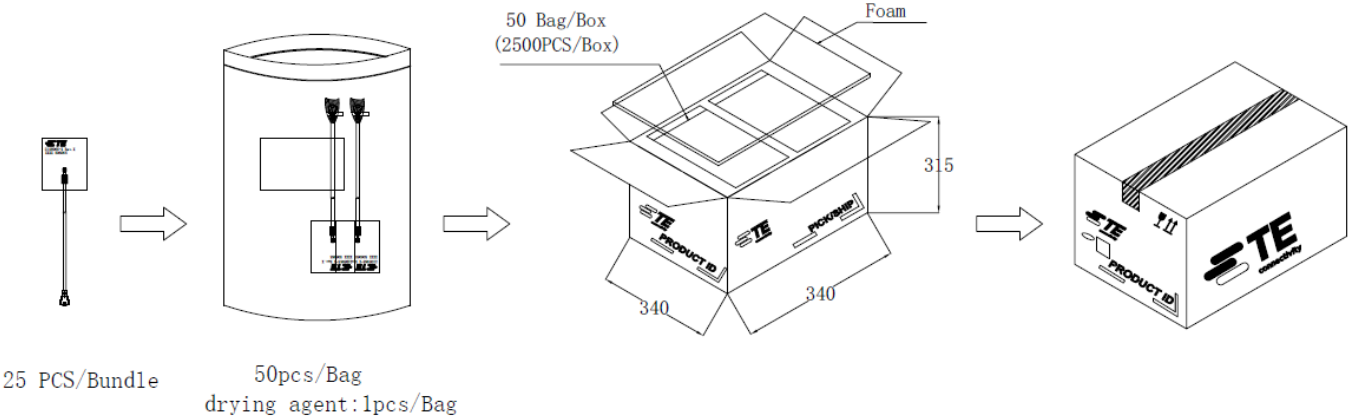
(Refer to Page9 for dimension “A” and “B”)



MATING COMPONENTS TO PART NUMBERS AND DIMENSIONS

2108965-1	50.0	1.968	1.37	MHF-TYPE PLUG	RECEPTACLE (TE PN: 2337019-1)	
2108965-2	100.0	3.937	1.37	MHF-TYPE PLUG	RECEPTACLE (TE PN: 2337019-1)	
2108965-3	150.0	5.905	1.37	MHF-TYPE PLUG	RECEPTACLE (TE PN: 2337019-1)	
2108965-4	200.0	7.784	1.37	MHF-TYPE PLUG	RECEPTACLE (TE PN: 2337019-1)	
2108965-5	50.0	1.968	1.13	MHF4L-TYPE PLUG	RECEPTACLE (TE PN: 2334884-1)	
2108965-6	100.0	3.937	1.13	MHF4L-TYPE PLUG	RECEPTACLE (TE PN: 2334884-1)	
2108965-7	150.0	5.905	1.13	MHF4L-TYPE PLUG	RECEPTACLE (TE PN: 2334884-1)	
2108965-8	200.0	7.784	1.13	MHF4L-TYPE PLUG	RECEPTACLE (TE PN: 2334884-1)	
PART	MM	INCH	CABLE O.D("B"), MM	CONNECTOR TYPE	PART NUMBER	IMAGE
NUMBER	CABLE LENGTH(A)			(ON CABLE)	MATING COMPONENTS	

PACKAGING



TE TECHNICAL SUPPORT CENTER

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