



Netz 5in1-SM

CELLULAR/LTE MIMO, 2.4/5.0 GHz ISM MIMO and GNSS - Screw Mount

Part #: 100-00177-01



Description

The Netz 5in1-SM is a MIMO technology solution by Maxtena that combines two LTE antennas, and two WiFi-ISM antennas with GNSS. Our 5 in 1 solution is ideal for high data throughput and streaming, video, industrial and IOT applications. It offers a low profile design with easy mounting and integrated SMA connectors. The antenna is designed with rugged PC+ABS plastic black housing and is ideal for the most demanding environmental challenges.

Electrical Specification

Parameter		Specification		
Cable 1 - CELLULAR / LTE Antenna	Center Frequency	698-960 MHz	1710-2170 MHz	2500-2700 MHz
	Band	700/850/900 MHz	1700/1800/1900/2100 MHz	2600 MHz
	Return Loss	-10.6 dB	-16.3 dB	-13.9 dB
	VSWR	2.0:1	1.4:1	1.5:1
	Efficiency	45.1%	47.1%	46.8%
	Peak Gain	-0.9 dBi	3.3 dBi	4.3 dBi
	Average Gain	-3.5 dB	-3.3 dB	-3.3 dB
	Impedance	50 Ω		
	Polarization	Linear		
	Radiation Pattern	Omni-Directional		
	Max. Input Power	25 W		
Cable 2 - CELLULAR / LTE Antenna	Center Frequency	698-960 MHz	1710-2170 MHz	2500-2700 MHz
	Band	700/850/900 MHz	1700/1800/1900/2100 MHz	2600 MHz
	Return Loss	-10.9 dB	-16.1 dB	-9.3 dB
	VSWR	1.9:1	1.4:1	2.1:1
	Efficiency	45.1%	46.6%	42.1%
	Peak Gain	1.4 dBi	3.0 dBi	3.0 dBi
	Average Gain	-3.5 dB	-2.8 dB	-3.8 dB
	Impedance	50 Ω		
	Polarization	Linear		
	Radiation Pattern	Omni-Directional		
	Max. Input Power	25 W		

Features

- LTE/Wifi/GNSS/ISM frequencies
- High performance
- MIMO technology solution
- A low profile design with easy mounting: Screw Mount
- Ground Plane Independent
- Customizable Cable and Connector
- Dimensions: Ø 96 x H 90 mm
- IP67, IP69, IK09

Applications

- Fleet Management
- Commercial Transport
- HD Video Monitoring
- Buses, Train & Commercial Applications
- Smart Cities



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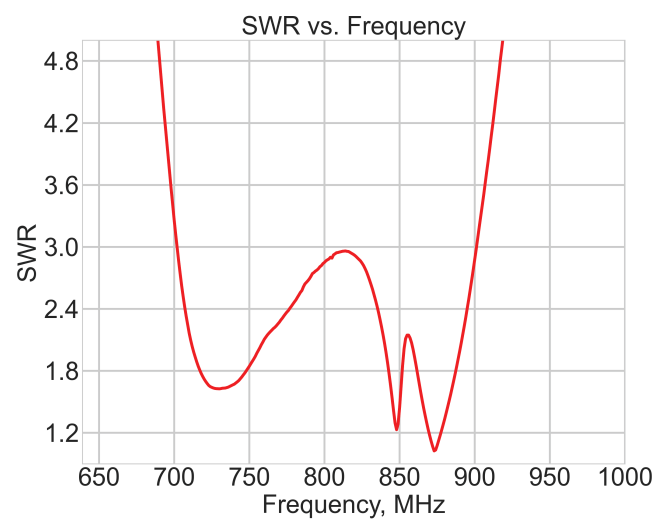
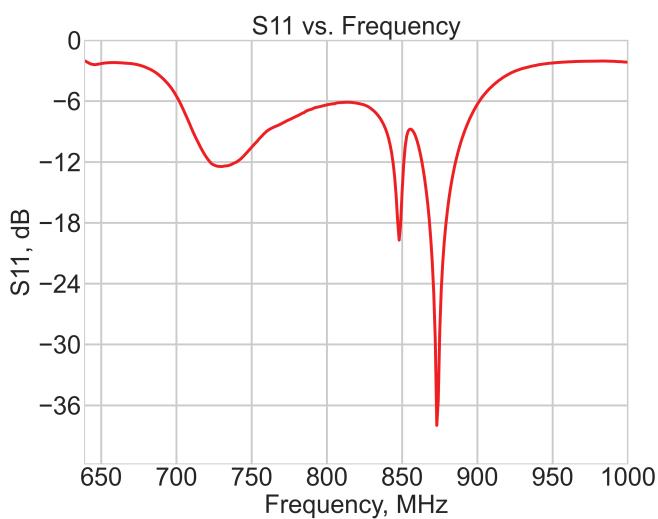
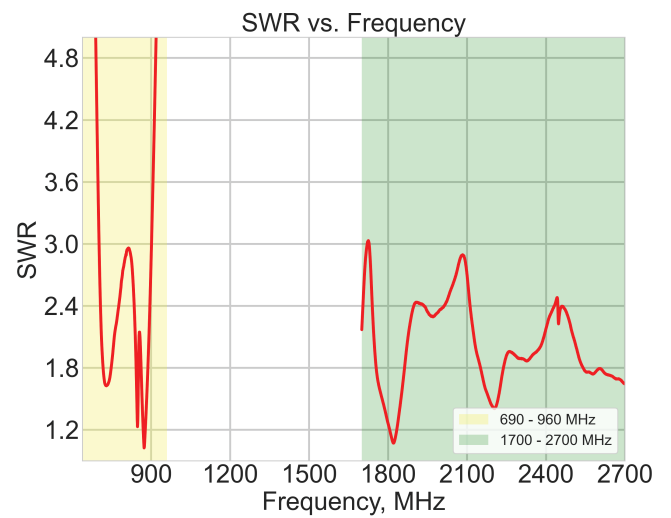
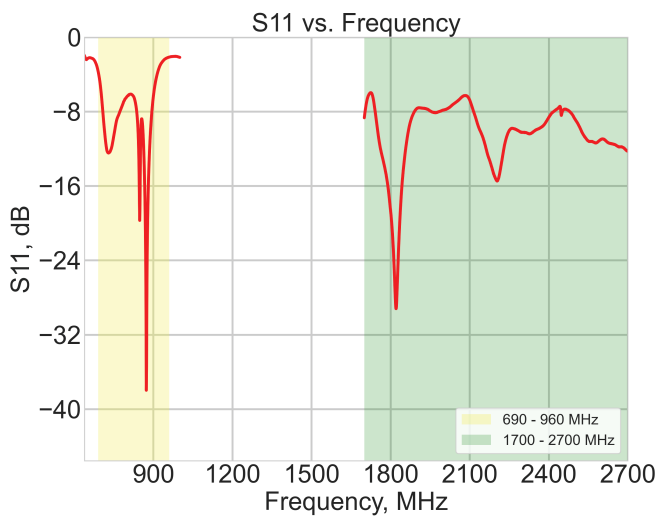
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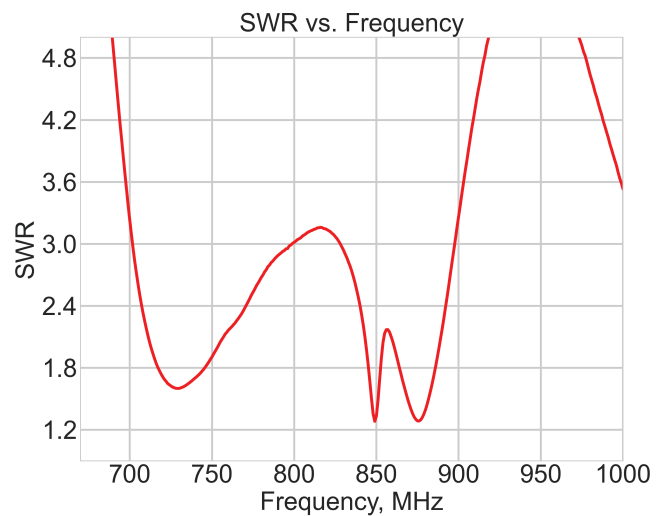
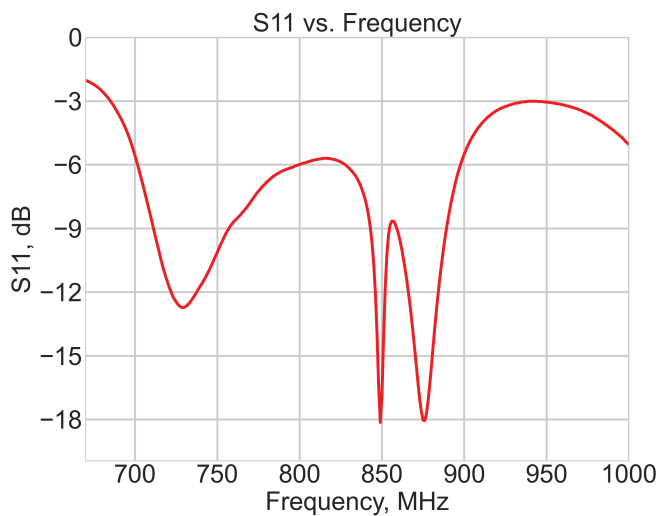
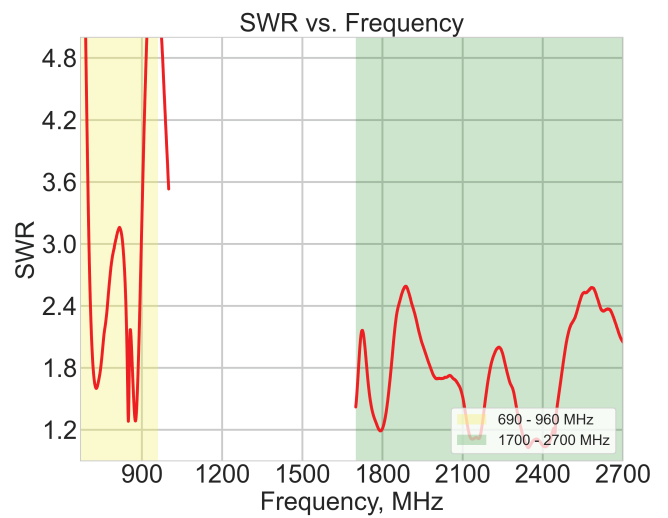
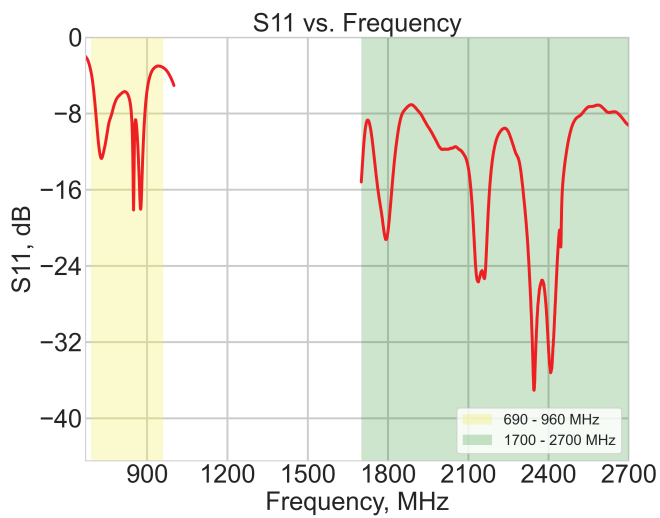
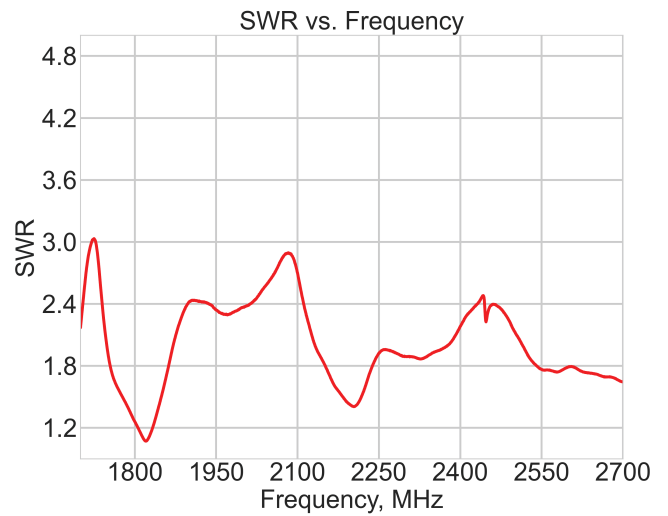
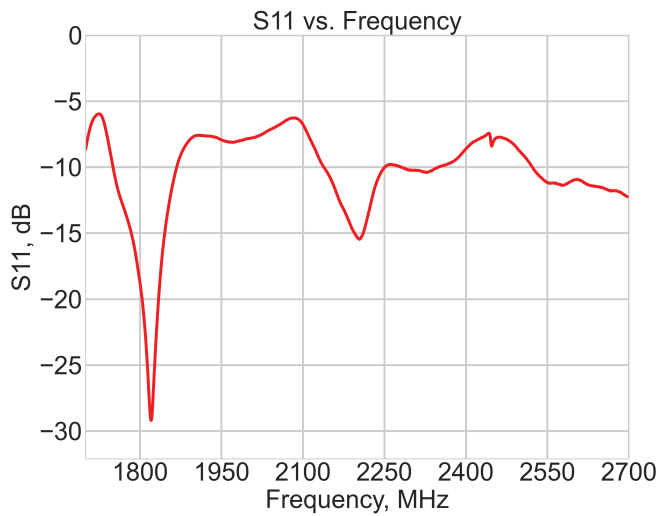
Parameter		Specification	
Cable 3 - ISM Antenna	Frequency Range	2410-2490 MHz	4920-5925 MHz
	Band	2.4 GHz	5.0 GHz
	Return Loss	-12.6 dB	-14.4 dB
	VSWR	1.6:1	1.5:1
	Efficiency	44.9%	35.6%
	Peak Gain	4.8 dBi	3.0 dBi
	Average Gain	-3.5 dB	-4.5 dB
	Impedance	50 Ω	
	Polarization	Linear	
	Radiation Pattern	Omni-Directional	
	Max. Input Power	25 W	
Cable 4 - ISM Antenna	Frequency Range	2410-2490 MHz	4920-5925 MHz
	Band	2.4 GHz	5.0 GHz
	Return Loss	-11.5 dB	-14.7 dB
	VSWR	1.7:1	1.6:1
	Efficiency	41.7%	35.7%
	Peak Gain	4.6 dBi	3.1 dBi
	Average Gain	-3.8 dB	-4.5 dB
	Impedance	50 Ω	
	Polarization	Linear	
	Radiation Pattern	Omni-Directional	
	Max. Input Power	25 W	
Cable 5 - GPS/GLONASS Antenna	Frequency Range	1575.42 MHz	1598-1610 MHz
	Band	1575 MHz	1602 MHz
	Return Loss	≤ -14 dB	
	VSWR	$\leq 1.5:1$	
	Impedance	50 Ω	
	Radiation Pattern	Hemispherical	
	Polarization	RHCP	
	Saw Filter	Post-Filter	
	Active Gain	23 dB @ 3 V; 24dB @ 5 V	
	Noise Figure	1.2 dB	
	Voltage	2.7 - 5.5 V	
	Current Consumption	15 - 25 mA	
	Power Consumption	40.5 - 137.5 mW	
	Out of Band Rejection	32 dBc	

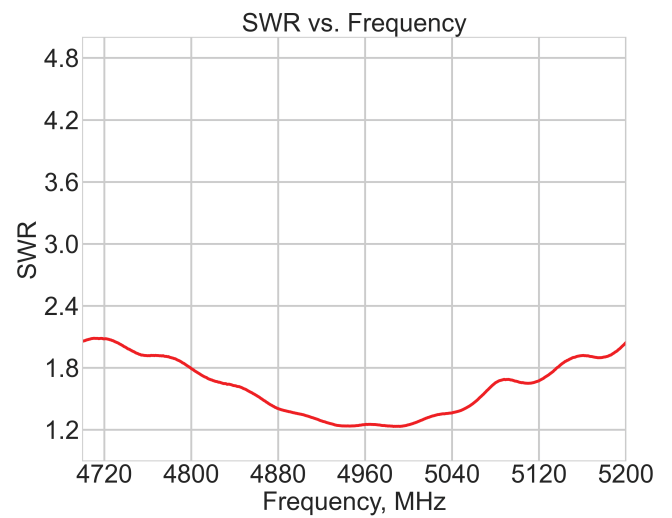
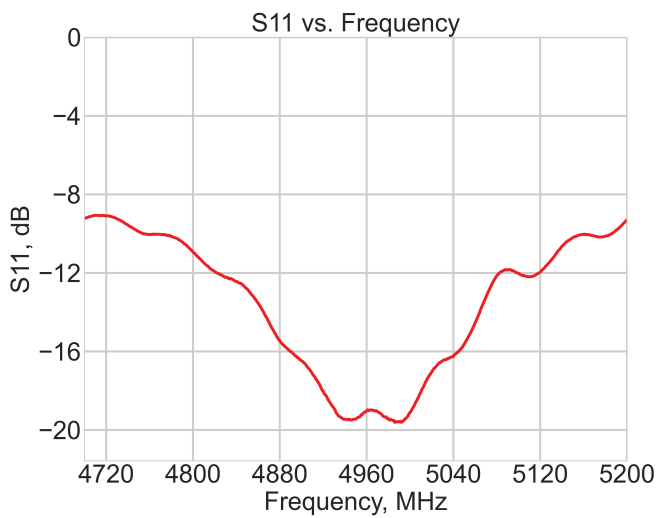
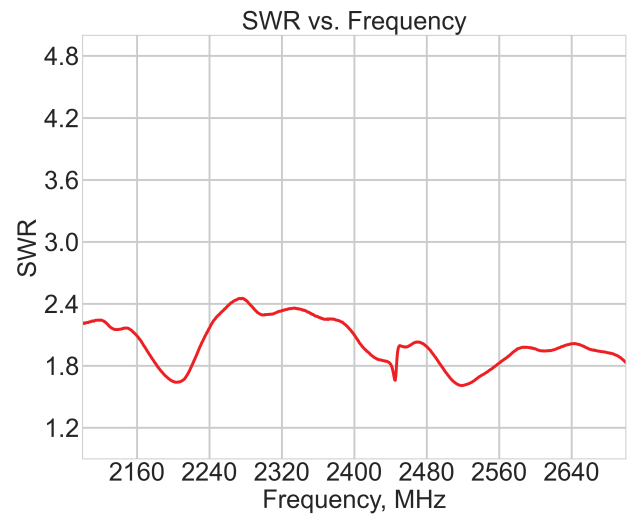
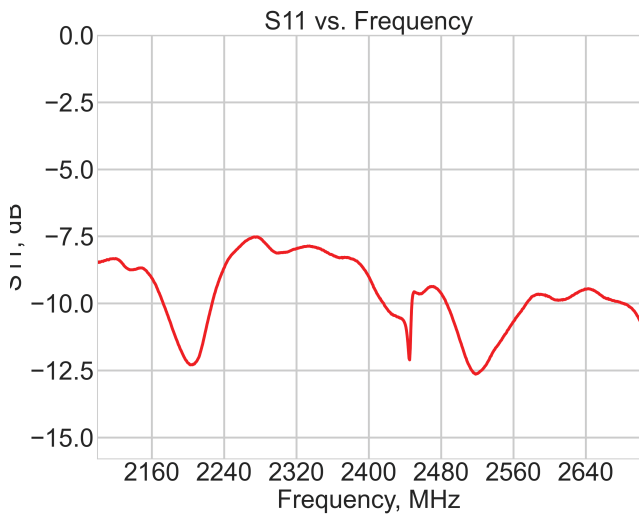
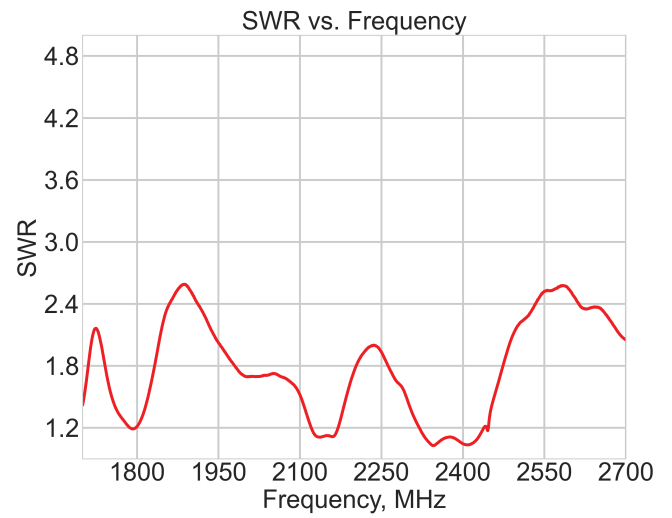
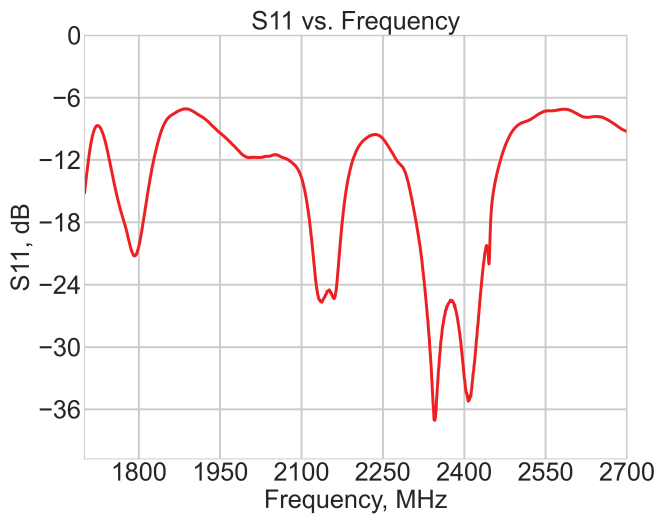
Mechanical Specification

Parameter	Specification
Antenna Dimensions	Ø 96 x 90 mm
Operating Temperature	-40°C to + 85°C
Mounting Type	Screw Mount
Connector	SMA-Male / SMA-Male RP Standard
Cable	LL100/LL195 Standard
Radome	ASA / White, Black
Substance Compliance	RoHS
Certificates	IP67, IP69, IK09

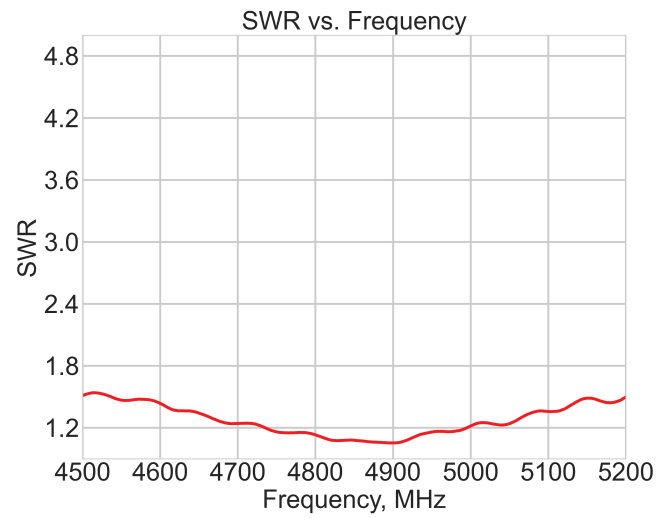
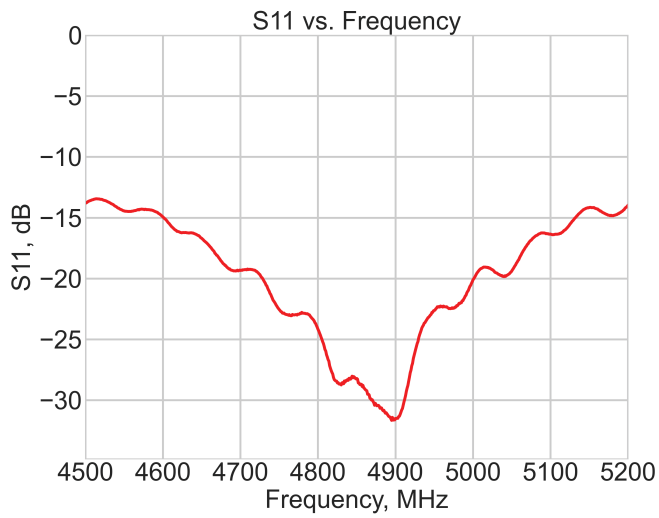
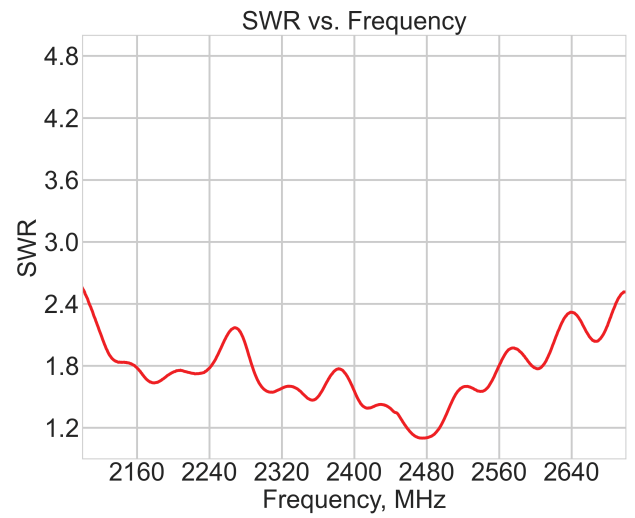
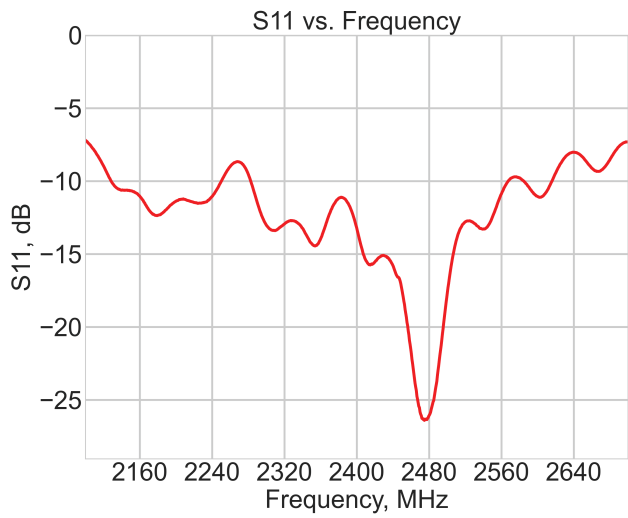
*Mounted on Metal Plate of 30 x 30 cm







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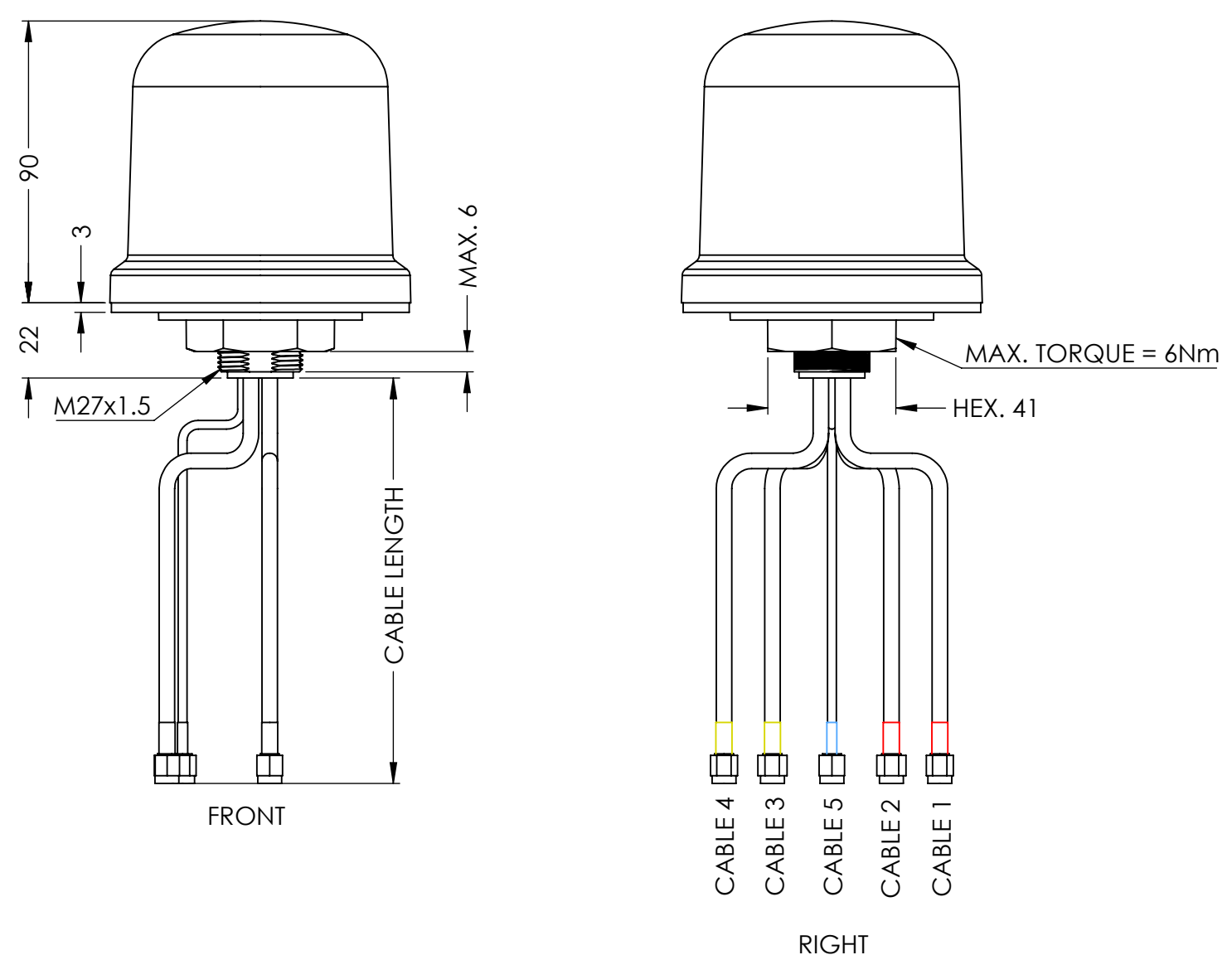


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NOTES:

1. FREQUENCY:
 - CABLE 1 AND 2: (CELLULAR, LTE) 698-960 MHz, 1710-2170 MHz AND 2500-2700 MHz
 - CABLE 3 AND 4: (2.4, 5.0 GHz ISM) 2410-2490 MHz AND 4920-5925 MHz
 - CABLE 5: (GPS, GLONASS, QZSS, GALILEO) 1575.42 MHz AND 1598-1610 MHz
2. DIMENSIONS ARE AFTER MOUNTING
3. CUSTOMIZABLE CABLE AND CONNECTOR TYPE
4. MOUNTING TYPE: SCREW MOUNT
5. MAX MOUNTING THICKNESS: 6mm
6. MATERIALS:
 - RADOME: ASA
 - RADOME COLOR: BLACK or WHITE
 - ANTENNA BASE: ASA
7. OPERATING TEMPERTATURE: -40°C ~ +85°C
8. STORAGE TEMPERTATURE: -40°C ~ +85°C
9. CERTIFICATES: IP67, IP69, IK09

DRAWING REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	INITIAL RELEASE	2021-10-08	JET



100-00177 CONFIGURATION TABLE				
DASH NO	CABLE TYPE	CABLE LENGHT	CONNECTOR TYPE	RADOME COLOR
-01	CABLE 1: LL195 CABLE 2: LL195 CABLE 3: LL195 CABLE 4: LL195 CABLE 5: LL100	200 CM 200 CM 200 CM 200 CM 200 CM	SMA-MALE SMA-MALE SMA-MALE RP SMA-MALE RP SMA-MALE	BLACK

ITEM 100-00177 REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	INITIAL RELEASE	2021-10-08	JET

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN MM
TOLERANCES:
FRACTIONAL: ±
ANGULAR: MACH ± .5° BEND ±
ONE PLACE DECIMAL ± 1.0
TWO PLACE DECIMAL ± .50

INTERPRET GEOMETRIC TOLERANCING PER:

THIRD ANGLE PROJECTION

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	JET	2021-10-08
CHECKED	ZX	2021-10-08
ENG APPR.	NPC	2021-10-08
MFG APPR.		
Q.A.		

CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.

MAXTENA, INC

TITLE: 100-00177 NETZ 5 IN 1 SM

SIZE B DWG. NO. 117-00521-01 REV A

CAGE CODE: 5KQH7 SCALE: NONE SHEET 1 OF 1