

R2SP Series *Square Puck, Surface Mount Antennas*



The **R2SP Series**, a versatile 3-in-1 combination antenna designed for Public Safety, Fleet Management, Kiosk, ATM and other IoT applications, this antenna ensures high performance, reliability, and precision. Offering a flexible and modular design the R2SP series is configurable for a variety of frequency ranges and mounting types. The antenna is configured with two wideband 5G NR elements and GNSS capabilities within the 617-5925 MHz Sub 6GHz frequency range.

- 2x Wideband 5G NR/LTE Antenna Elements - 617 6000 MHz
- 1x GPS/Glonass
- Low Profile, Measuring 80 x 74 x 25.6 mm
- Permanent Stud Mount and Magnetic/Adhesive Mounting Options
- Ground Plane Independent



LTE



GPS / GNSS



FIRSTNET



5G



FRONTLINE

The **R2SP Series** is ideal for 5G NR applications, supporting 5G NR, 4G LTE, FirstNet, CBRS, LPWA, CAT-X, CAT-Mx, CAT-NBx, and NB-IoT. The 360-degree omni-directional radiation pattern provides seamless connectivity even in low-service areas, with a peak gain of 5.1 dBi.

Measuring 80 x 74 x 25.6 mm, the low-profile, IP67 and IP69 certified housing is constructed from durable ASA UV stable material. The heavy-duty anti-rotation screw mount allows easy and secure installation on vertical or horizontal surfaces without grounding requirements. The customizable antenna elements, cable lengths, and connector configuration make this antenna an ideal solution for a variety of IoT and Transportation applications.

ELECTRICAL DATA

Frequency (MHz)	Cable 1 (5G NR/LTE)	617-960/1427-2690/3300-5000/5150-5925
	Cable 2 (5G NR/LTE)	617-960/1427-2690/3300-5000/5150-5926
	Cable 3 (GPS/GLONASS)	1575-1606
VSWR	Cable 1: 5G NR/LTE(617-960/1427-2690/ 3300-5000/ 5150-5925 MHz)	2.0:1/2.6:1/3.2:1/2.6:1
	Cable 2: 5G NR/LTE(617-960/1427-2690/ 3300-5000/ 5150-5925 MHz)	2.2:1/2.6:1/3.3:1/2.8:1
Peak Gain (dBi)	Cable 1: 5G NR/LTE (617-960/1427-2690/3300-5000/5150-5925 MHz)	2.1/5.5/3.8/3.9
	Cable 2: 5G NR/LTE (617-960/1427-2690/3300-5000/5150-5925 MHz)	3.2/5.0/5.1/4.7
Power Rating (W)		25
Impedance (ohm)		50

ENVIRONMENTAL DATA

Operating Temperature (Celsius)	-40 to + 85
Storage Temperature (Celsius)	-40 to + 85
ROHS Compliant	Yes
Ingress Protection	IP67, IP69

GPS/LNA DATA

Frequency (MHz)	1575.42/1598-1606
VSWR	<1.5:1
Return Loss (dB)	<15.0
Active Gain (dB)	28 @ 2.7 V
Noise Figure (dB)	1.5 Typ
Polarization	RHCP
Voltage (V)	1.5-3.6

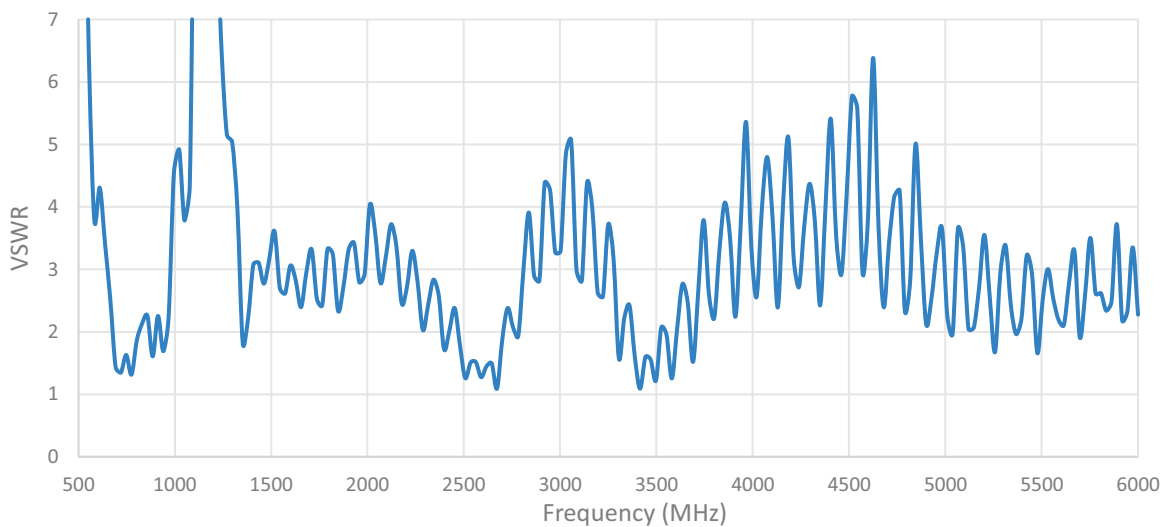
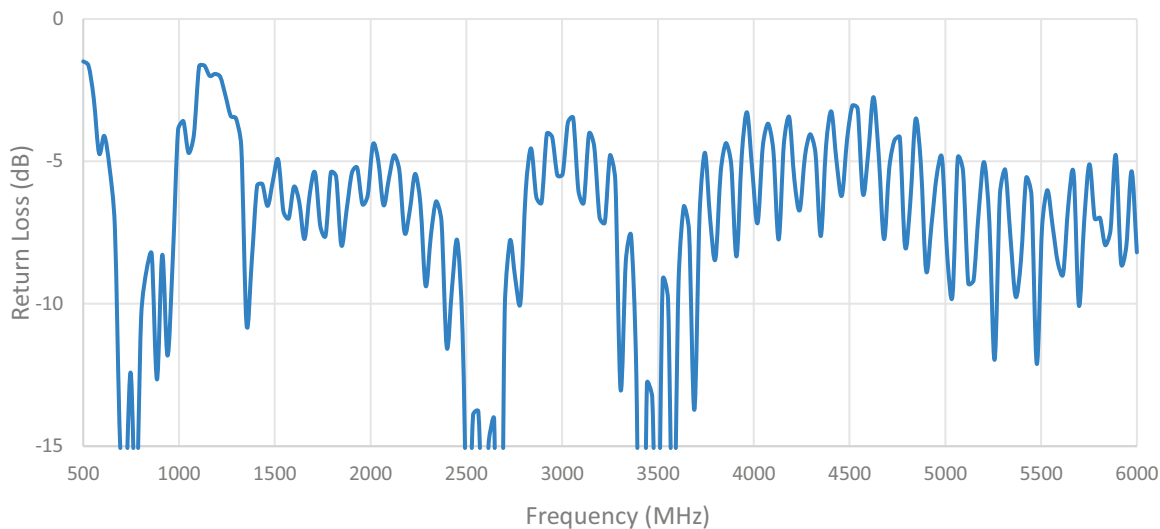
MECHANICAL DATA

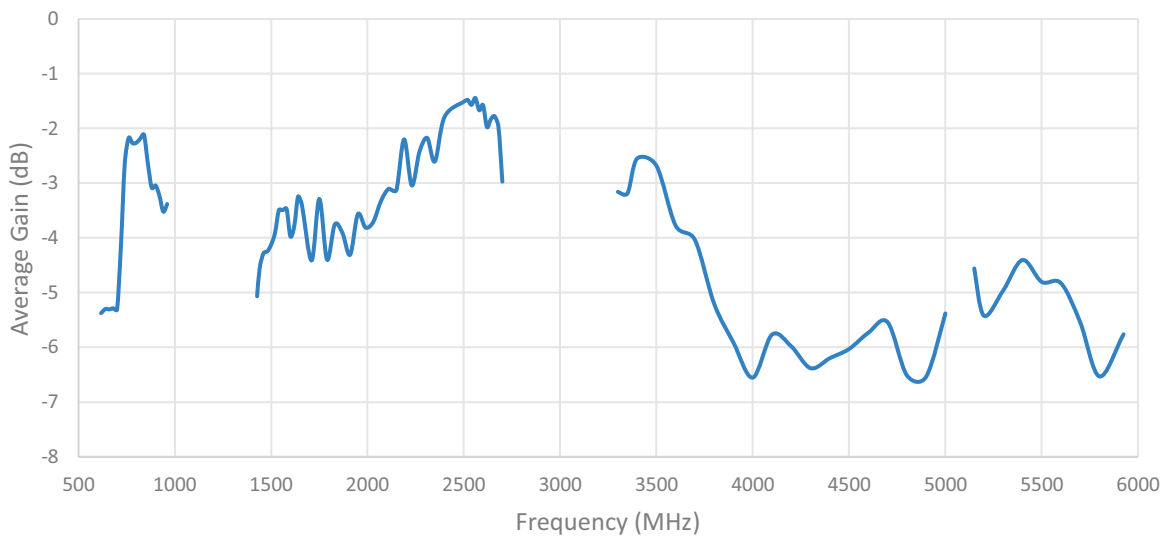
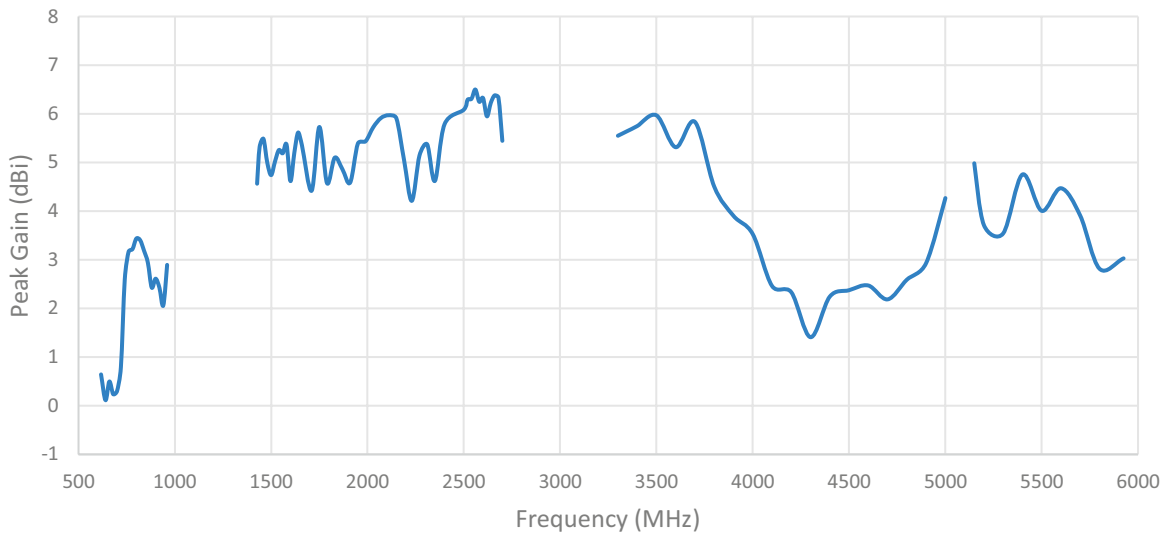
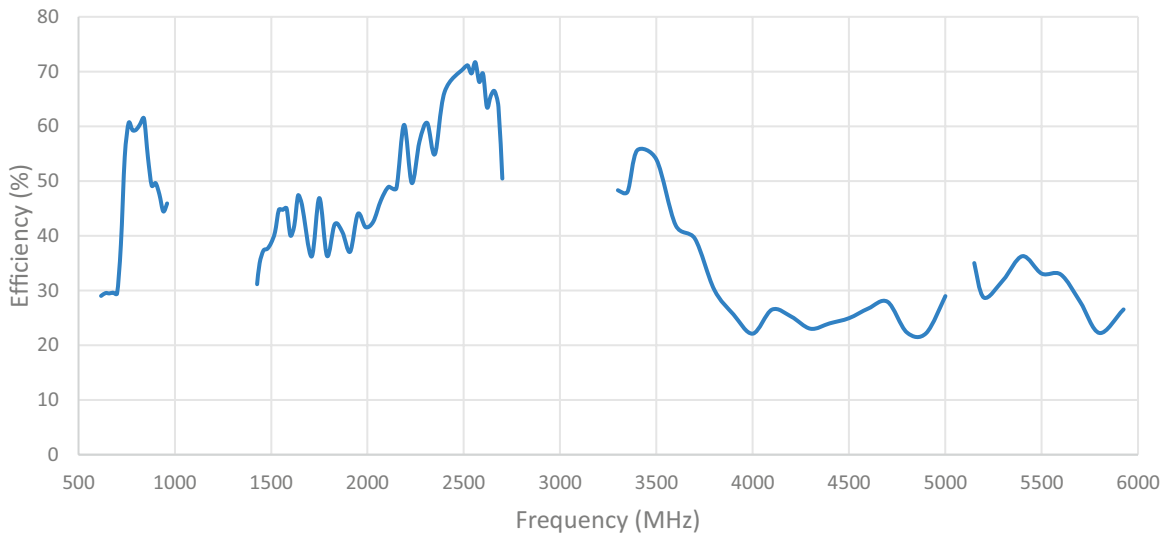
Color	Black
Mounting Type	Permanent/Stud Mount
Dimensions (Length x Width x Height)	80 x 74 x 25.6 mm (3.15 x 2.91 x 1.0 inches)
Max. Tighten Torque (Nm)	5 Nm
Radome Material	ASA UV Stable

SERIES PART NUMBERS

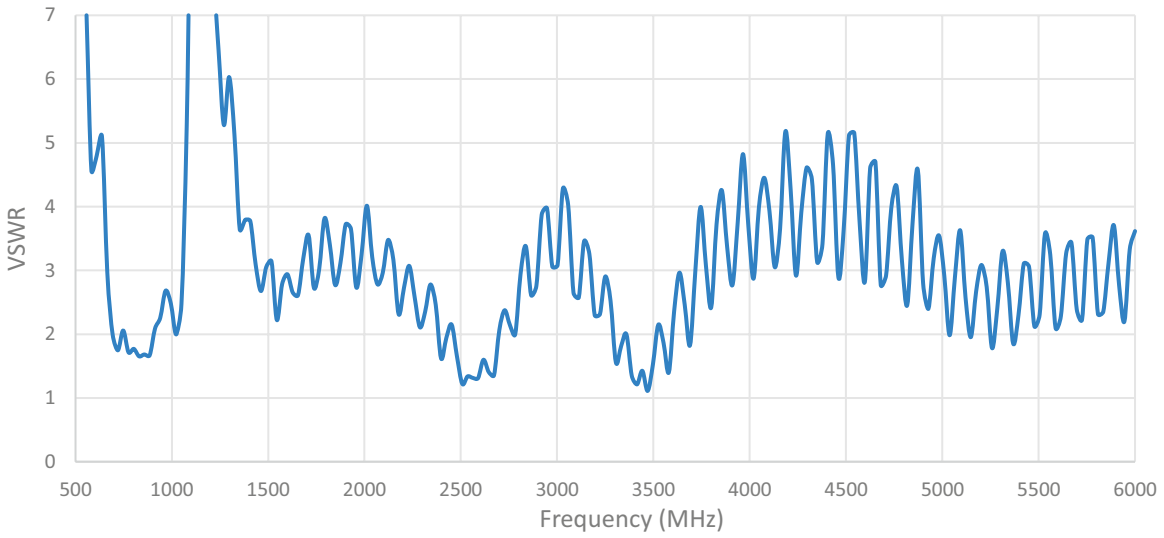
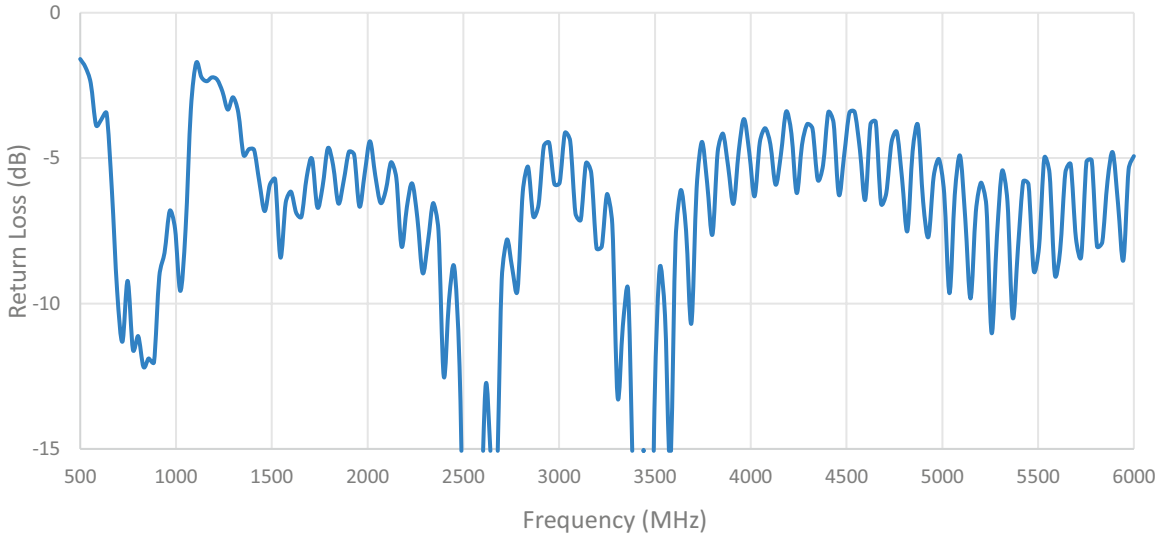
Series Part Numbers	Frequency	Cable Type	Cable Length	Connector Type
R2SP-DB-55-1-SS-B	Cable 1 (5G-NR/LTE): 617-5925 MHz Cable 2 (5G-NR/LTE): 617-5925 MHz	LMR-195, LMR-195	1 Foot/ .3 Meters	SMA Male, SMA Male, SMA Male
R2SP-DB-G55-6-SSS-B	Cable 1 (5G-NR/LTE): 617-5925 MHz Cable 2 (5G-NR/LTE): 617-5925 MHz Cable 3 (GPS/GLONASS): 1575-1606	LMR-195, LMR-195, LMR-100	6 Feet/1.82 Meters	SMA Male, SMA Male, SMA Male

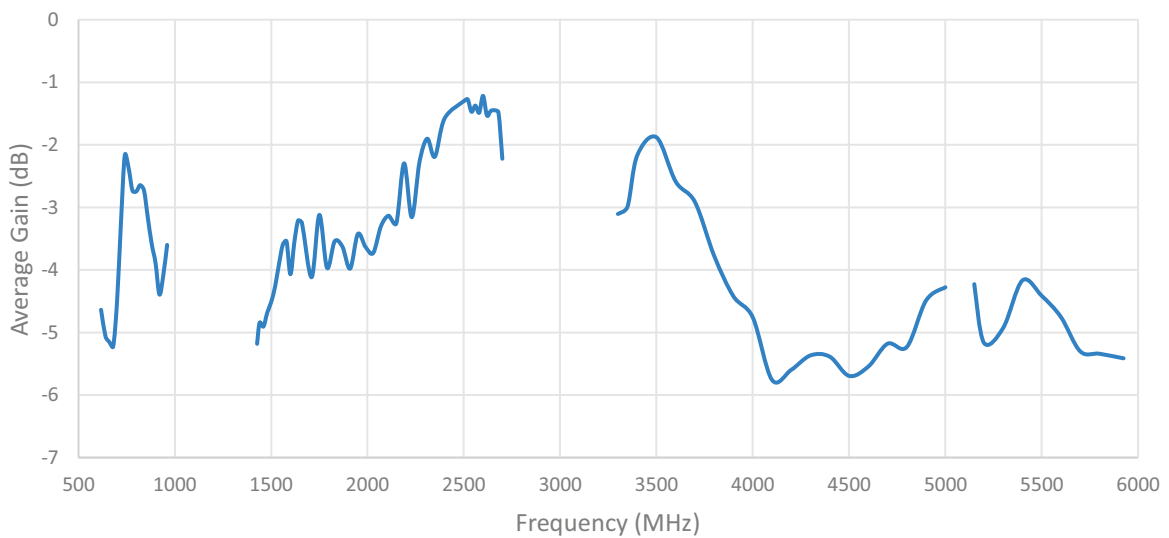
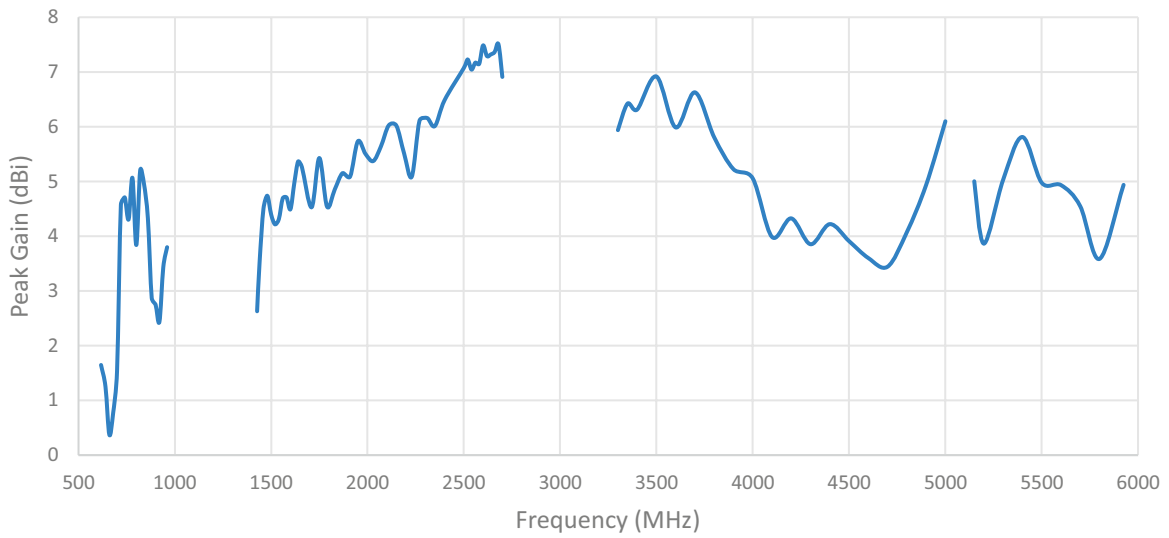
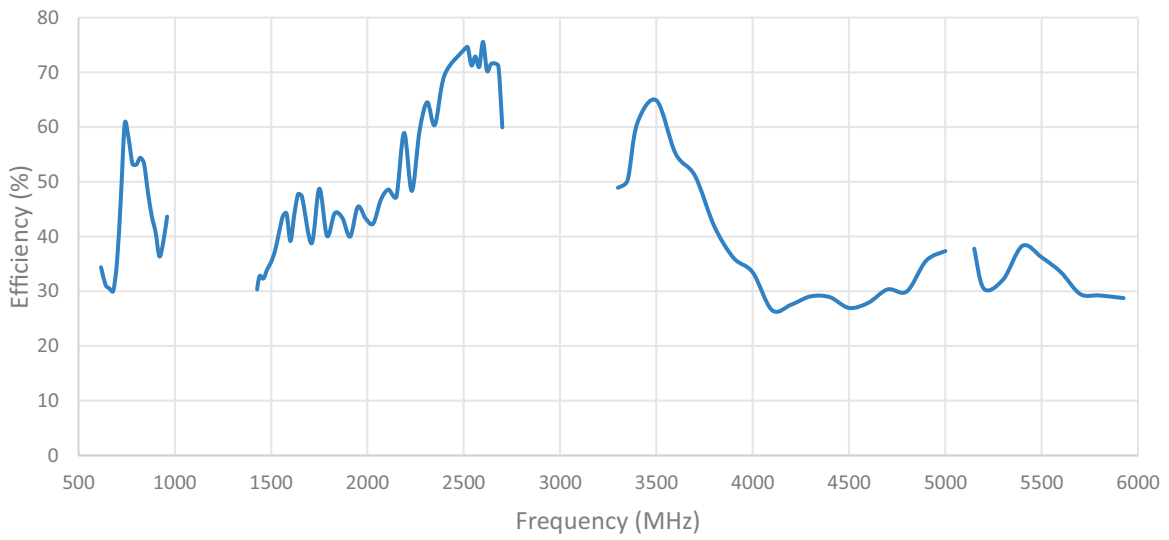
Cable 1: 5GNR



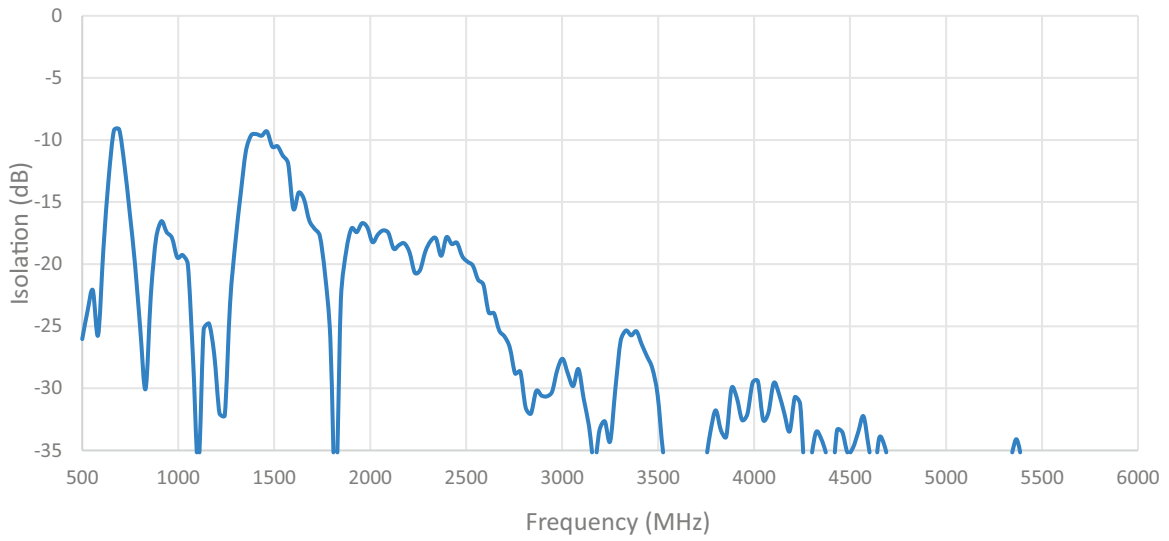


Cable 2: 5GNR

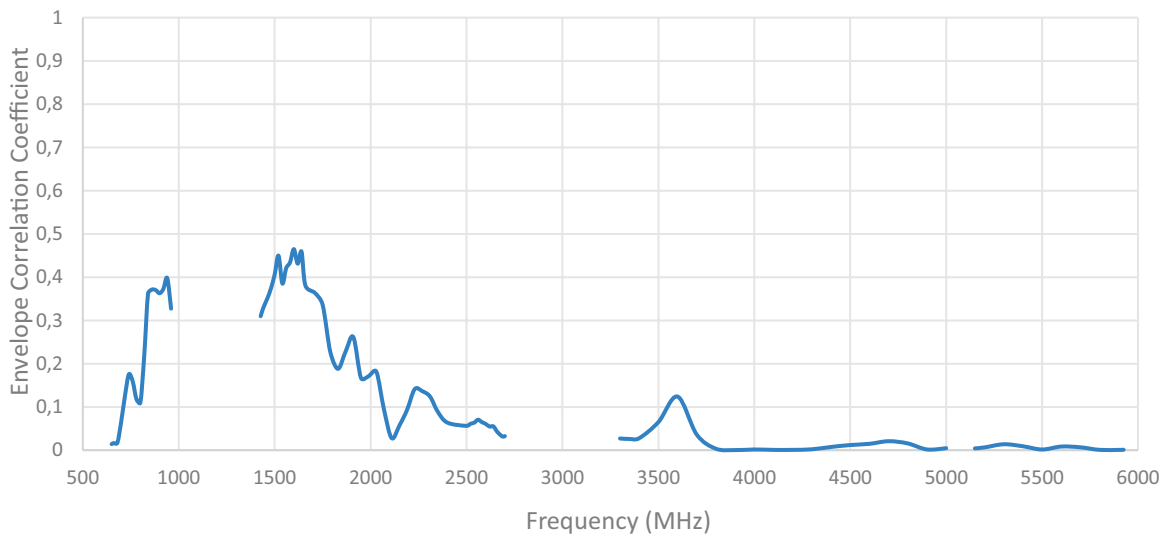


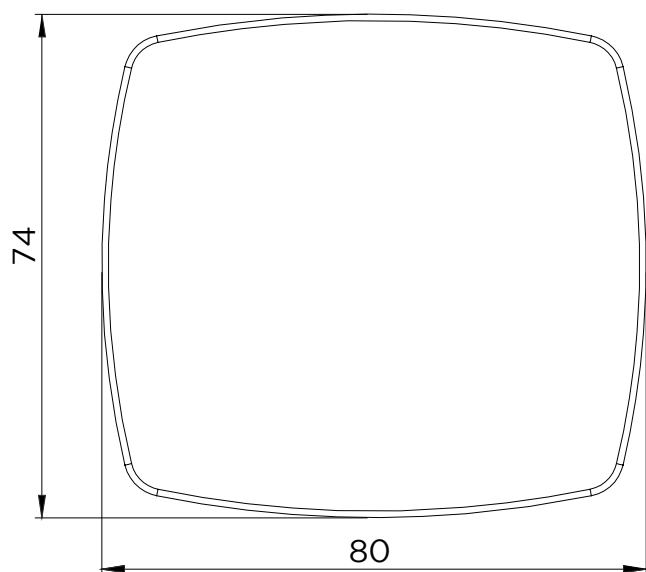
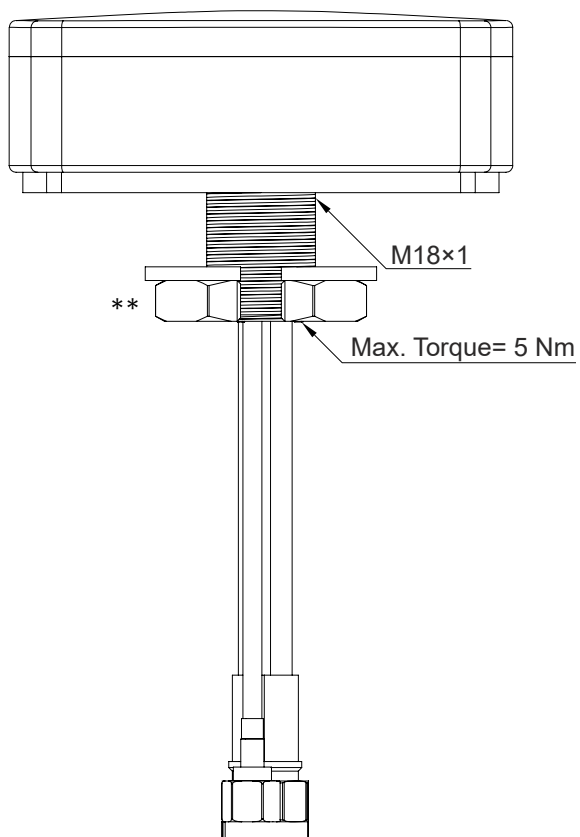
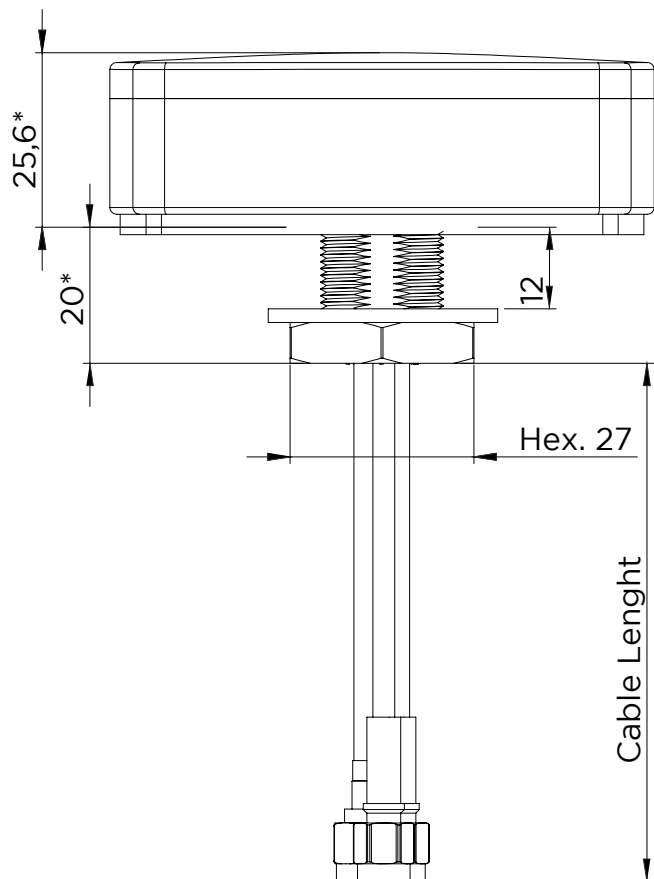


ISOLATION FOR CABLES 1 AND 2

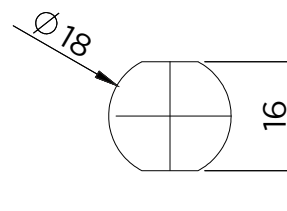


ENVELOPE CORRELATION COEFFICIENT FOR CABLES 1 AND 2





Mounting hole



Max. mounting thickness 12mm
 Note: Dimensions are in millimeters
 *Dimensions are after mounting
 **Max. Torque= 5 Nm