

Part No. 9001939

LTE Antenna

698-960 MHz; 1710-2170 MHz

Supports: Broadband LTE, 4G/5G, LTE CAT-M, NB-IoT, Cellular LPWA

TRT-MP00032-AP
Item Desc: GSM/LTE ANTENNA 9001939 AVX
Rev: 1.0
Total Pages: 7
Date: 26-APR-2022
Approved by: Ken Guo *Ken Guo*



LTE antenna

Low Band: 698 – 960 MHz
High Band: 1710 - 2170 MHz

Electrical Specifications

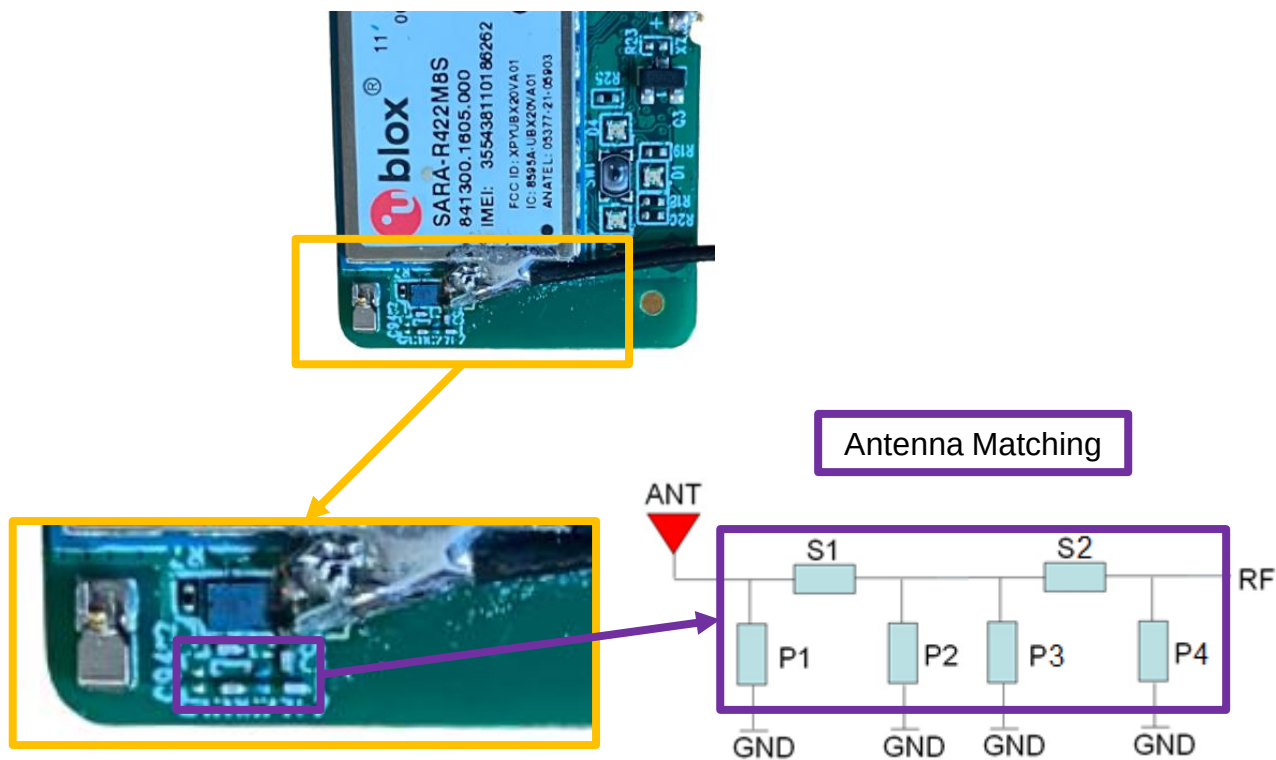
Frequency (MHz)	698 - 960	1710 - 2170
Peak Gain (dBi)	-3.3	0.9
Average Efficiency (%)	11.5	43.5
Return Loss (dB)	< -2.5	< -3
Feed Point Impedance	50 ohms unbalanced	
Polarization	Linear	
Power Handling	2.0 Watt CW	

Mechanical Specifications & Ordering Part Number

Ordering Part #	9001939
Dimensions (mm)	34.5 x 16.3 x 0.2
Mounting	using 3M 467MP Adhesive

Antenna Matching Structure

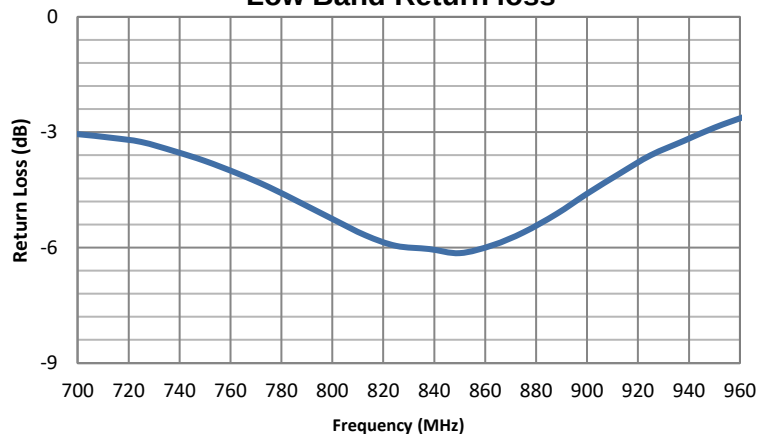
Customer's PCB Front View



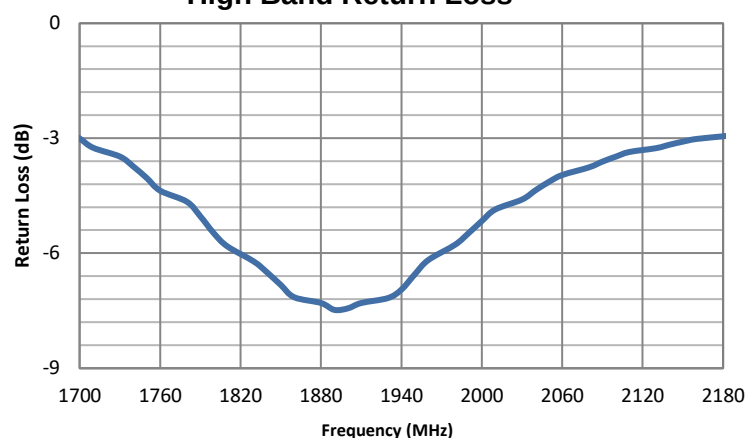
Matching	Value	PN
P1	NA	
S1	12pF	GRM33C0G120D25M500
P2	15nH	LQW03AW15NJ00D
P3	18nH	LQW03AW18NJ00D
S2	8pF	GRM33C0G080D25M500
P4	NA	

Return Loss, Efficiency and Peak Gain Plots

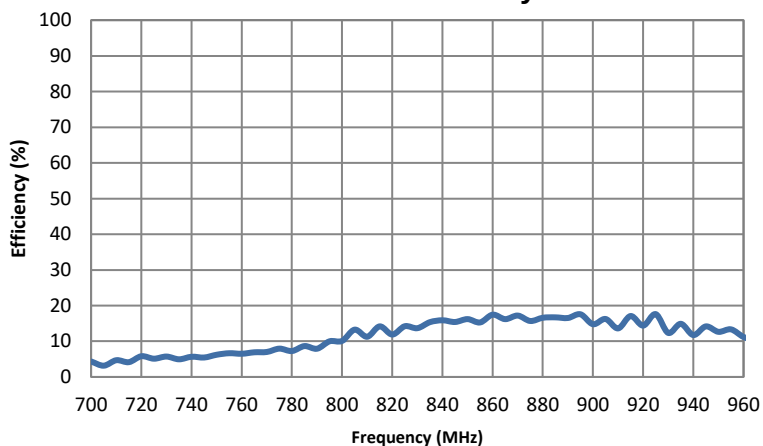
Low Band Return loss



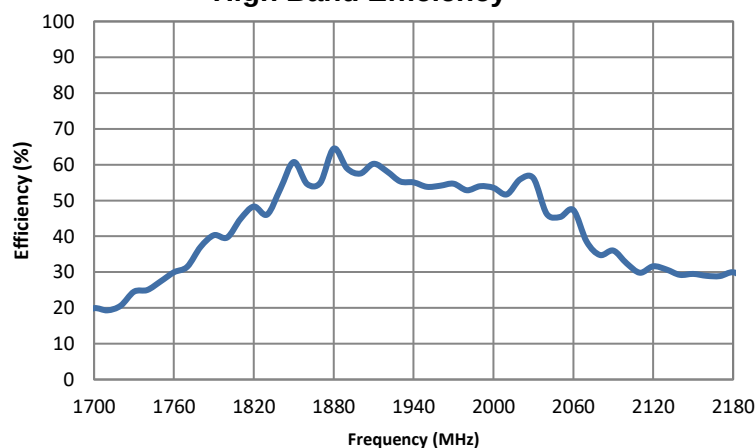
High Band Return Loss



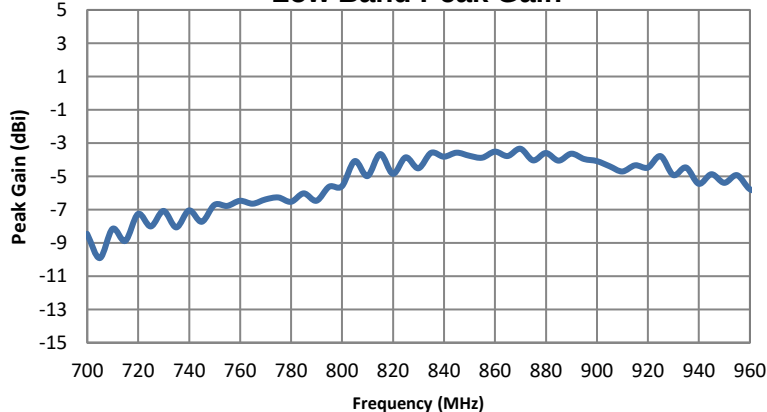
Low Band Efficiency



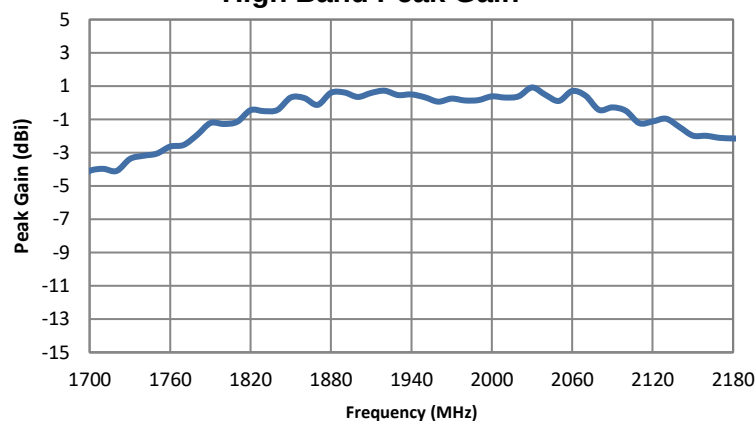
High Band Efficiency



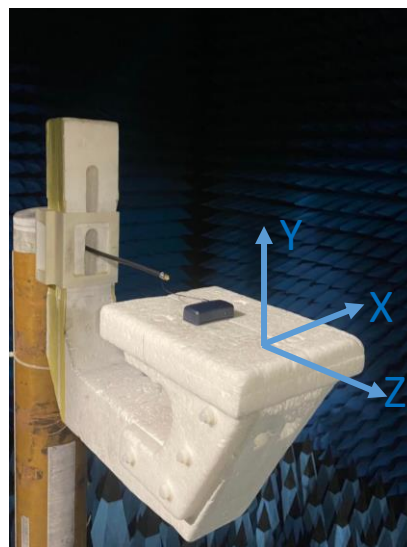
Low Band Peak Gain



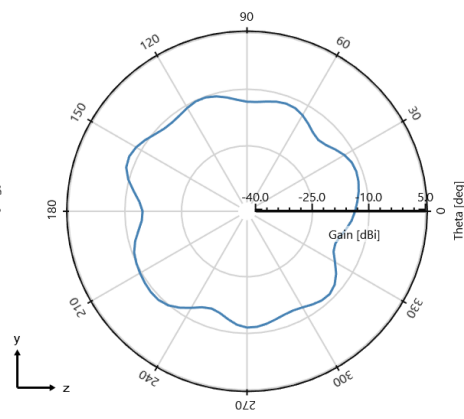
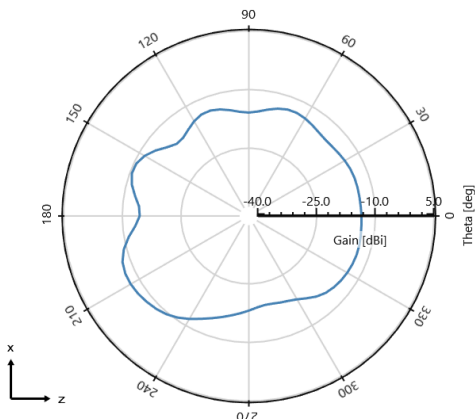
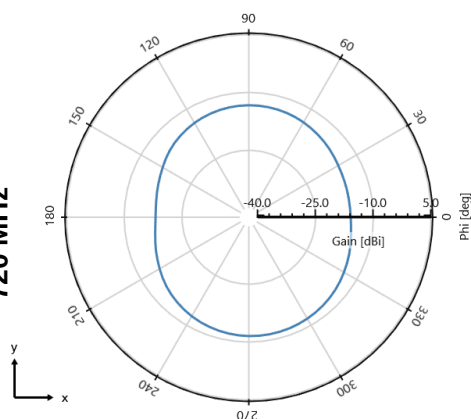
High Band Peak Gain



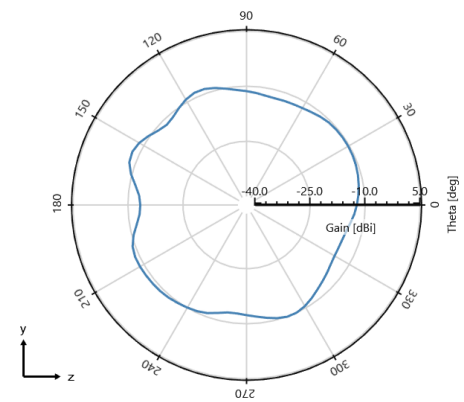
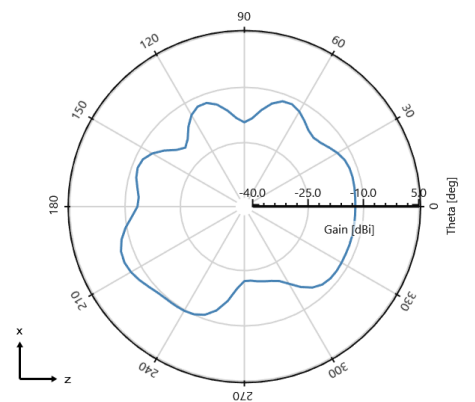
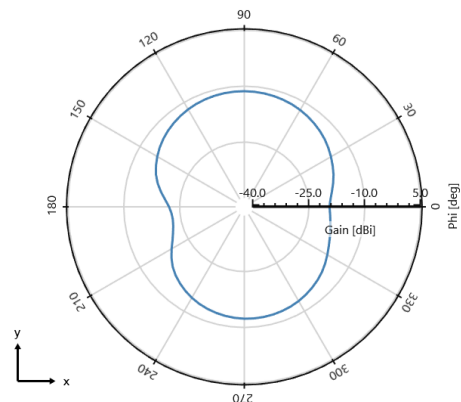
Antenna Radiation Patterns – Low Band



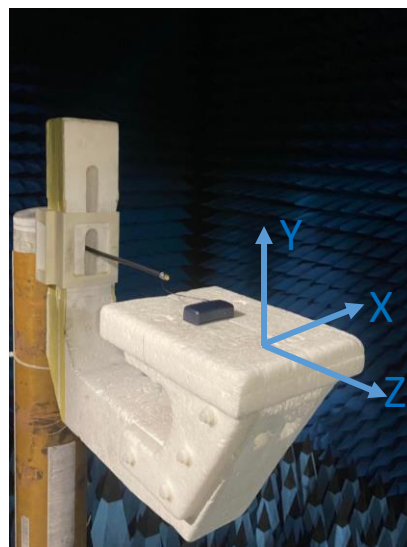
Low Band measured at
720 MHz



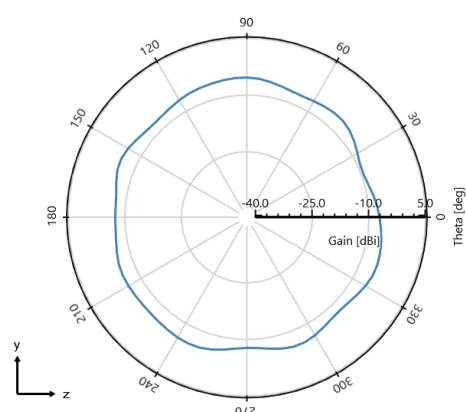
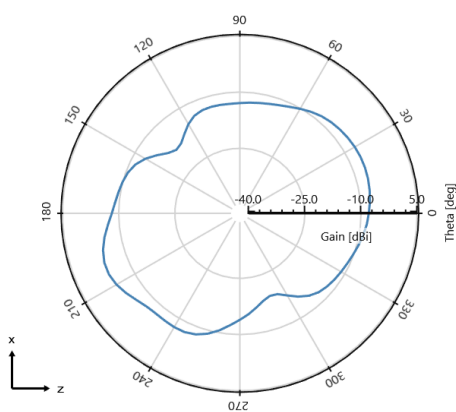
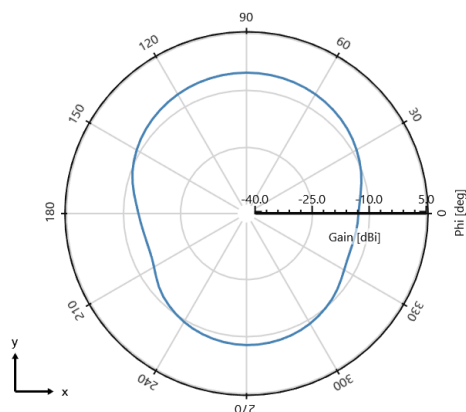
Low Band measured at
760 MHz



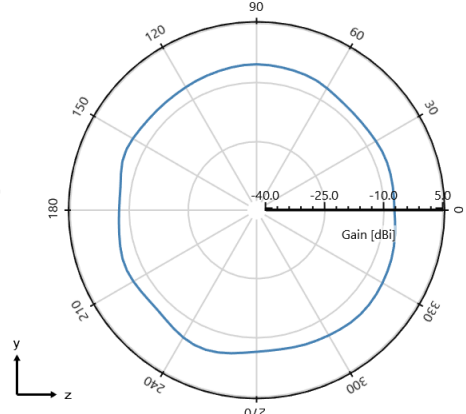
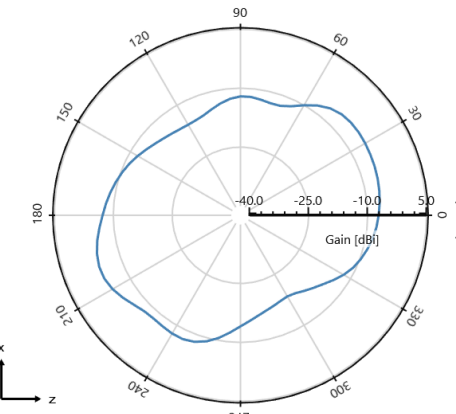
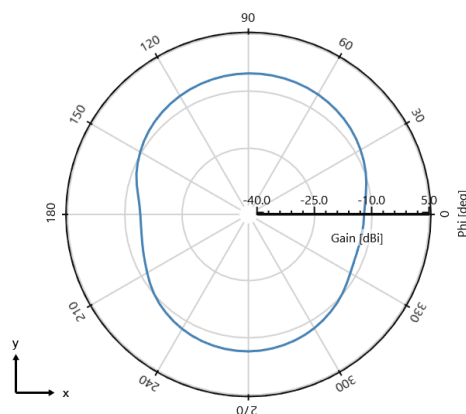
Antenna Radiation Patterns – Low Band cont.



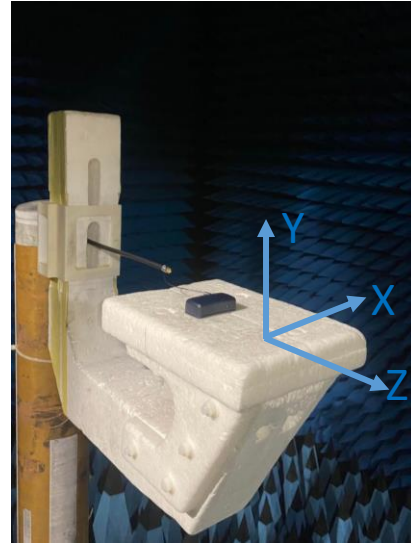
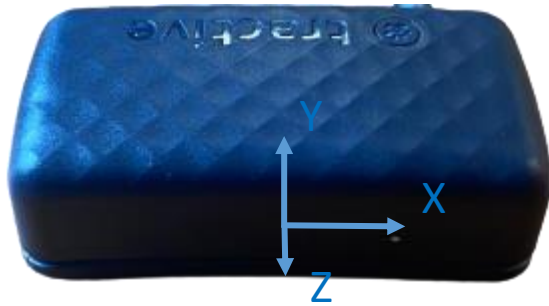
Low Band measured at
850 MHz



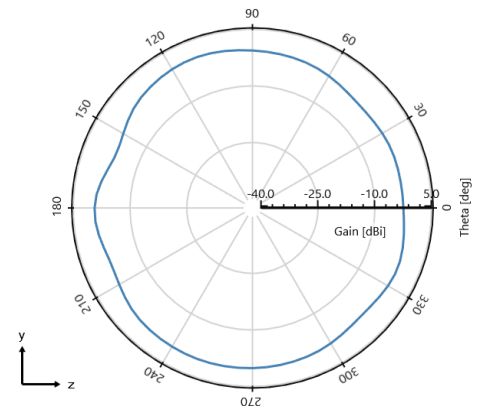
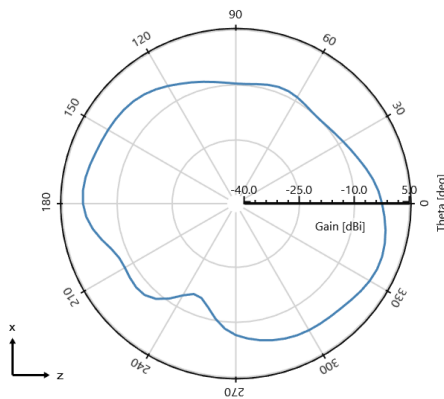
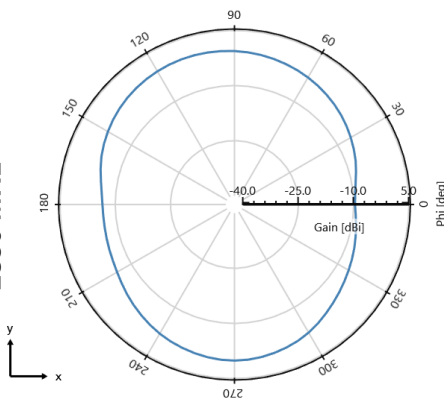
Low Band measured at
900 MHz



Antenna Radiation Patterns – Mid Band



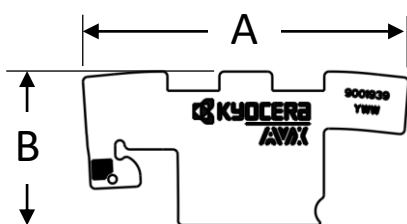
Low Band measured at
1850 MHz



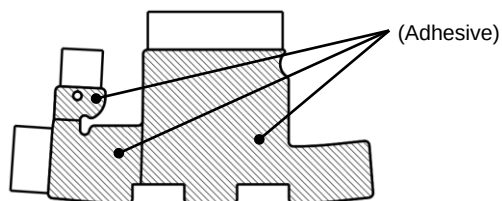
Mechanical Dimensions

Typical antenna dimensions (mm)

Part Number	A (mm)	B (mm)	Thickness (mm)
9001939	34.5 ± 0.3	16.3 ± 0.3	$0.2 \pm 10\%$



Top View



Bottom View