

Part No. 9003205

LTE Antenna

698-960 MHz; 1710-2620 MHz

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



LTE antenna

Low Band: 698 – 960 MHz

High Band: 1710 - 2620 MHz

Electrical Specifications

Frequency (MHz)	698 - 960	1710 - 2170	2570–2620
Peak Gain (dBi)	-4.9	-2	-9.8
Average Efficiency (dB)	-10	-9.5	-14
Return Loss (dB)	< -3	< -4	< -4.6
Feed Point Impedance	50 ohms unbalanced		
Polarization	Linear		
Power Handling	2.0 Watt CW		

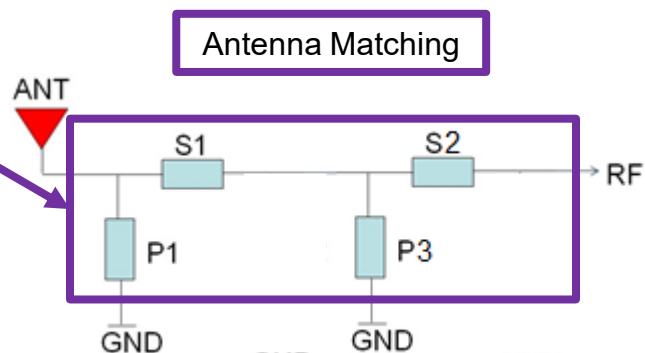
Mechanical Specifications & Ordering Part Number

Ordering Part #	9003205
Dimensions (mm)	34.1 x 19.6 x 0.3
Mounting	Using 3M 9448A Adhesive

Antenna Matching Structure

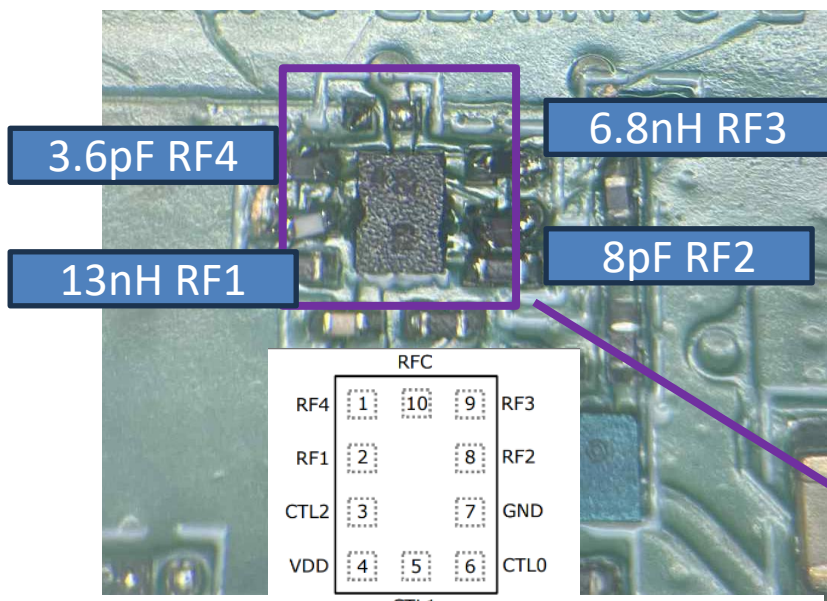


Customer's PCB Front View



Matching	Value
P1	NA
S1	6.8 nH
S2	0 ohm
P3	1.6 pF

Antenna Tuning Structure

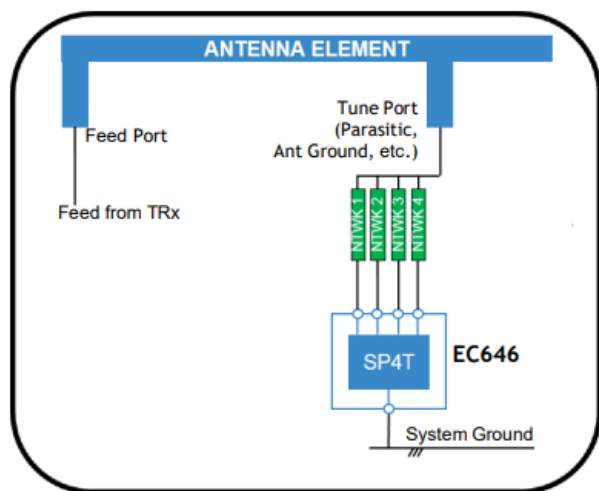


RF Switch Truth Table

RFC					
RF4	1	10	9	RF3	
RF1	2		8	RF2	
CTL2	3		7	GND	
VDD	4	5	6	CTL0	
	CTL1				

S0	S1	RF1	RF2	RF3	RF4
Low	Low	ON	OFF	OFF	OFF
Low	High	OFF	ON	OFF	OFF
High	Low	OFF	OFF	ON	OFF
High	High	OFF	OFF	OFF	ON

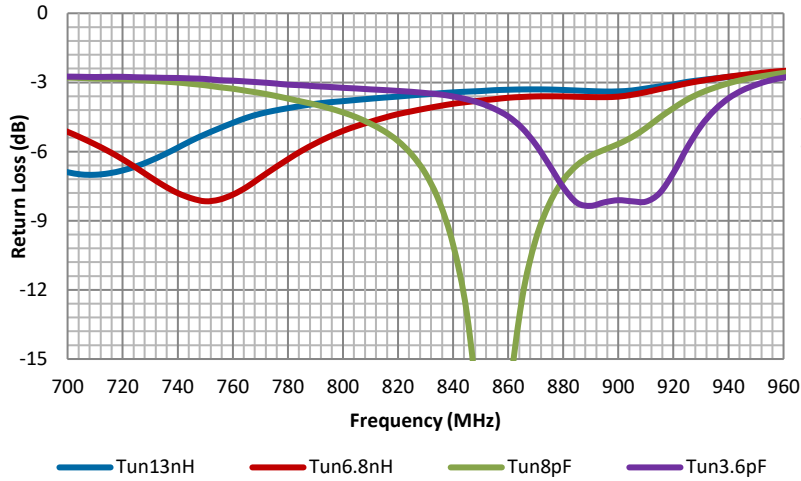
Tuning component	Value	Sub-band covered
RF1	13 nH	B1/B2/B3/B4/B12/B25/B28/B38/B66/B71/B85
RF2	8 pF	B5/B18/B19/B20/B26
RF3	6.8 nH	B13
RF4	3.6pF	B8



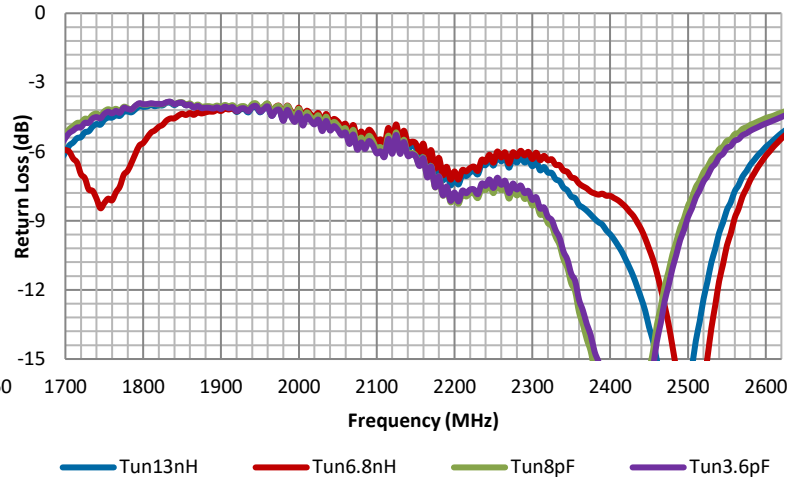
NTWK 1-4 are tuning networks (Typically Single L, C or an open)
Only RF connections shown

Return Loss, Efficiency and Peak Gain Plots

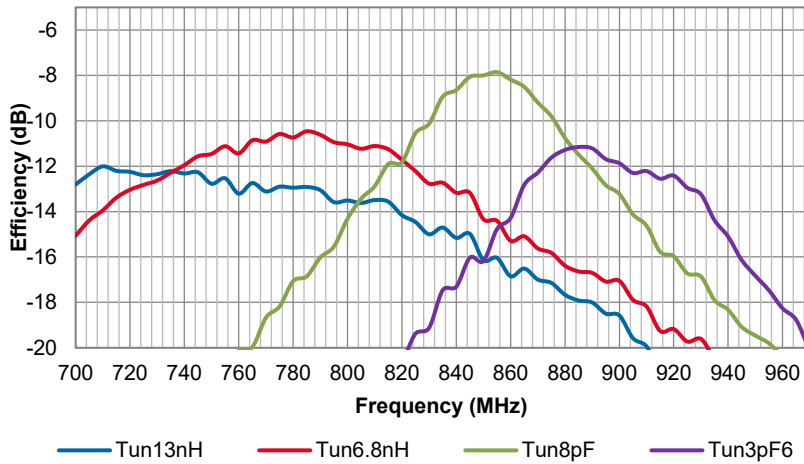
Low Band Return loss



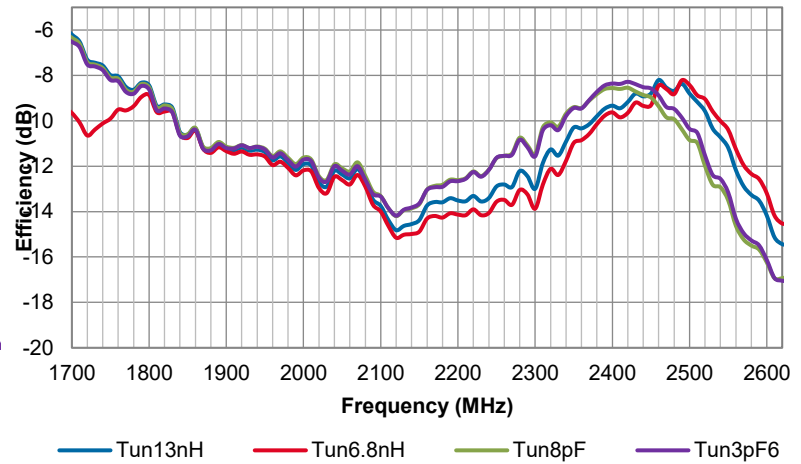
High Band Return Loss



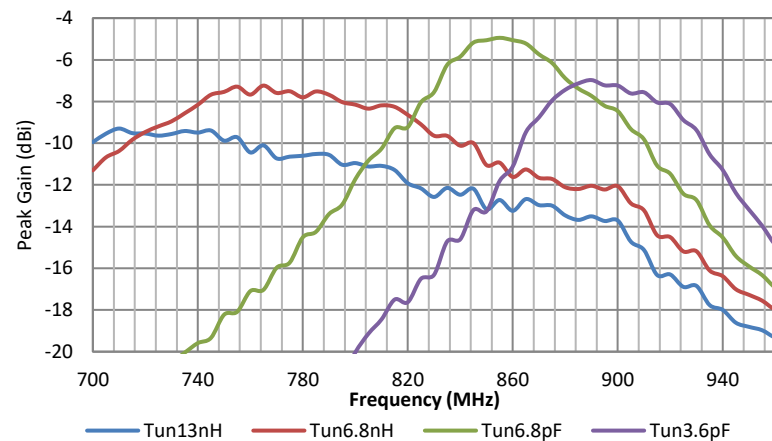
Low Band Efficiency



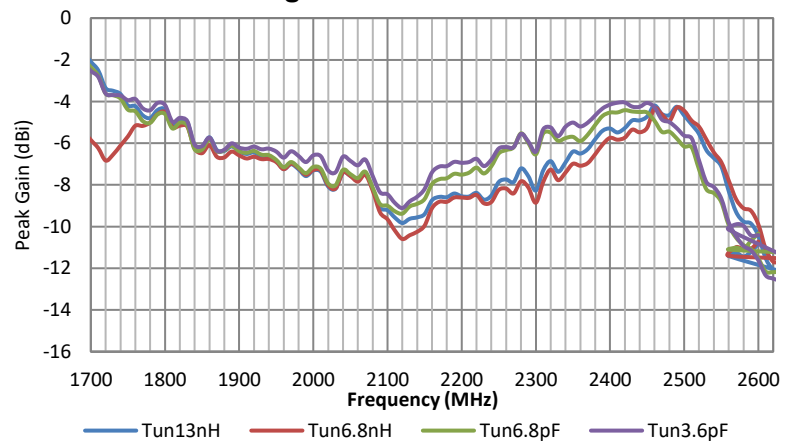
High Band Efficiency



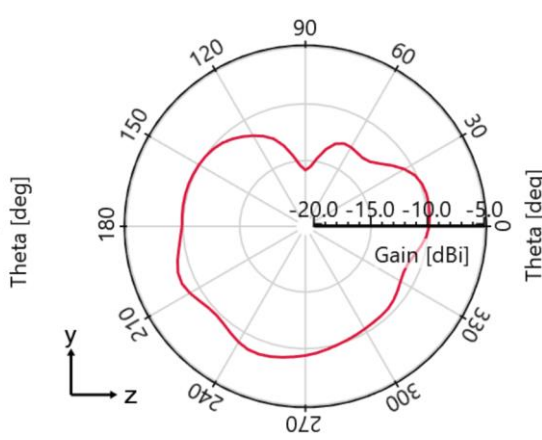
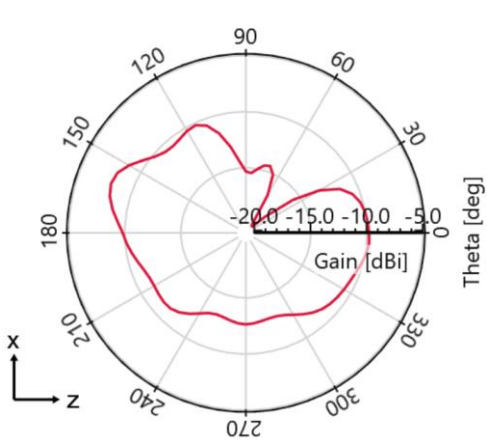
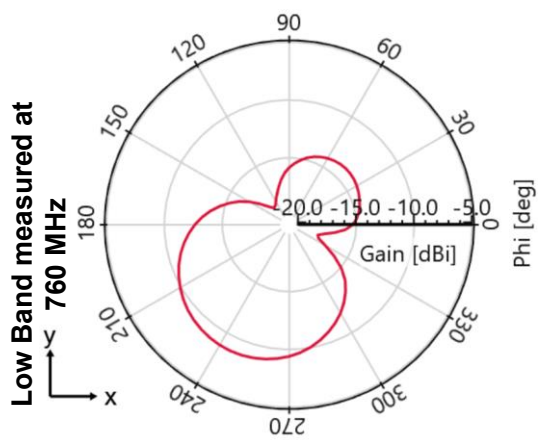
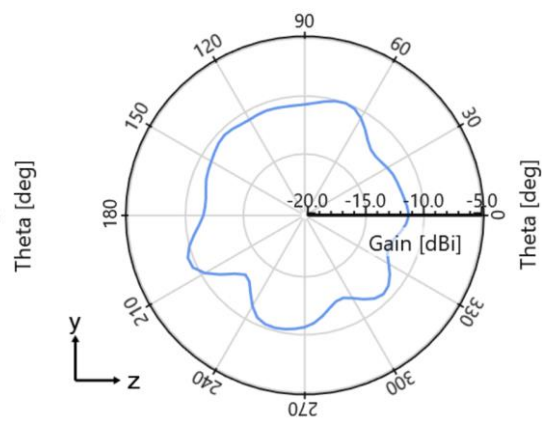
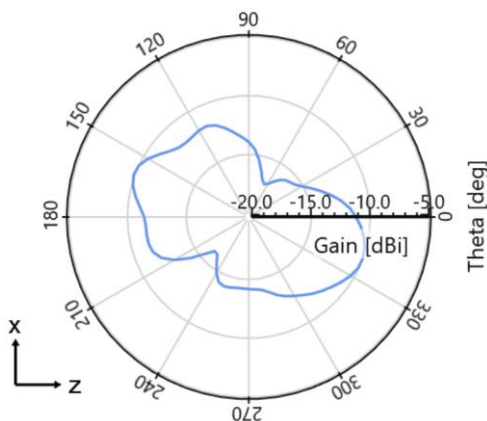
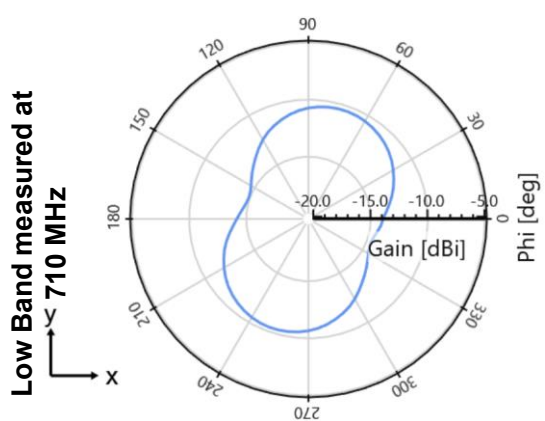
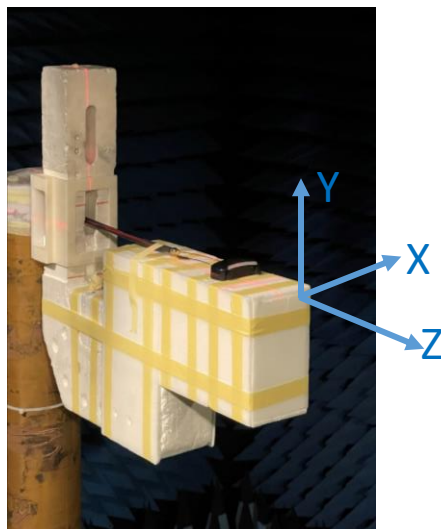
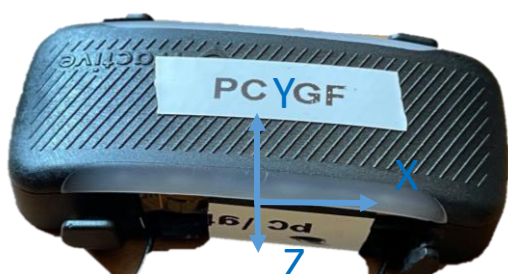
Low Band Peak Gain



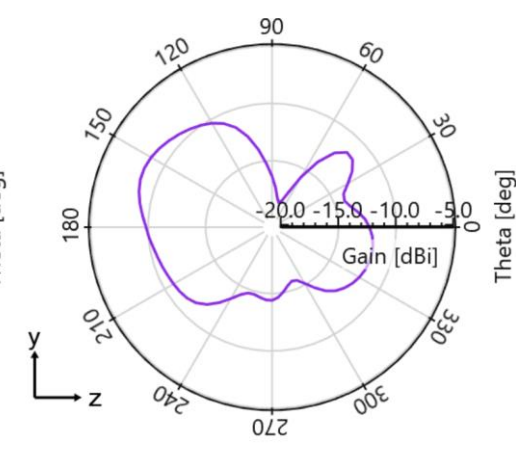
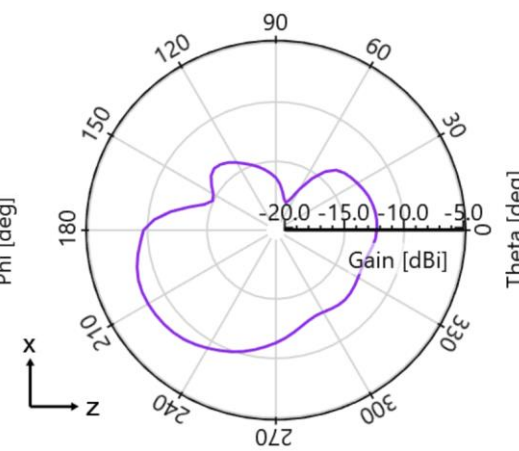
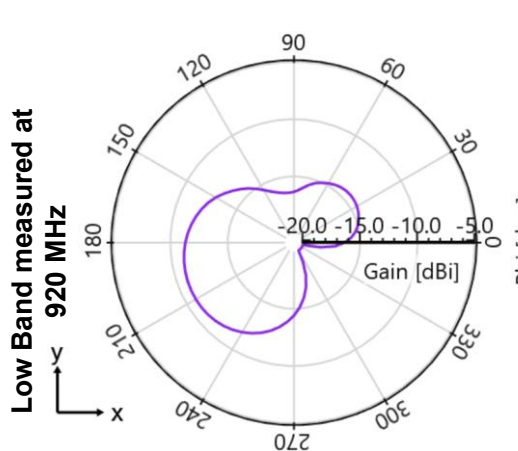
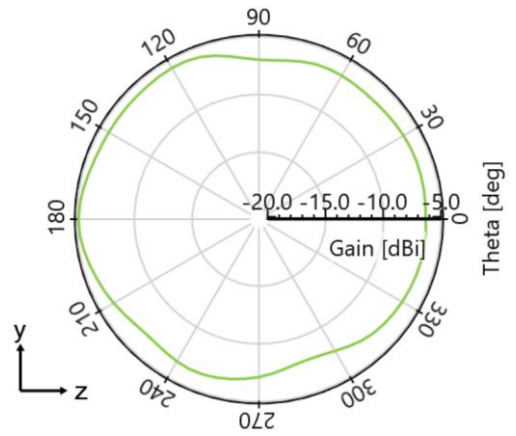
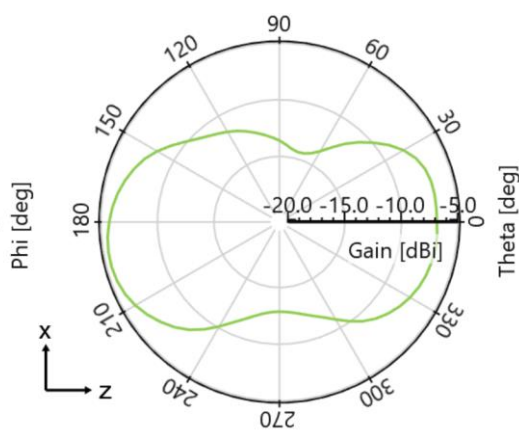
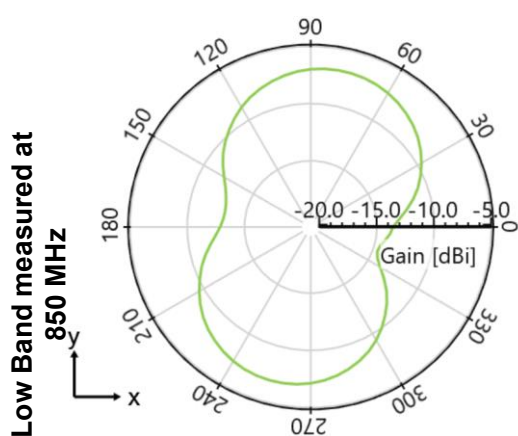
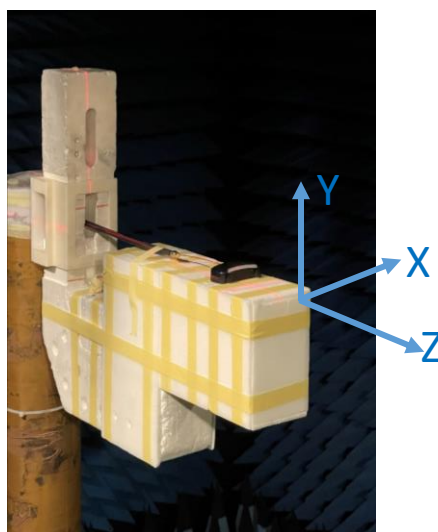
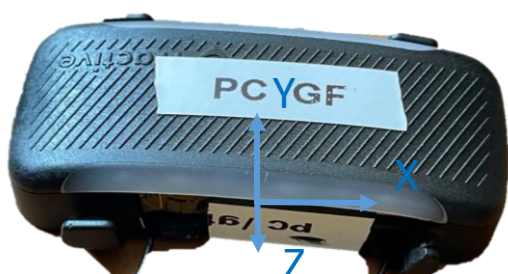
High Band Peak Gain



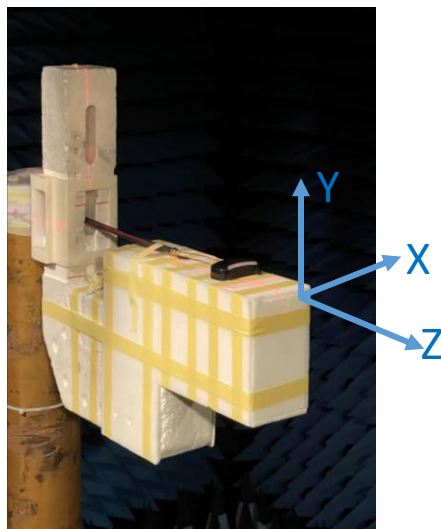
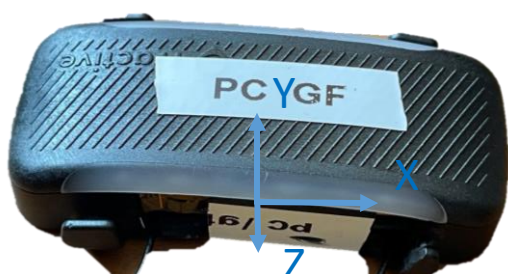
Antenna Radiation Patterns – Low Band



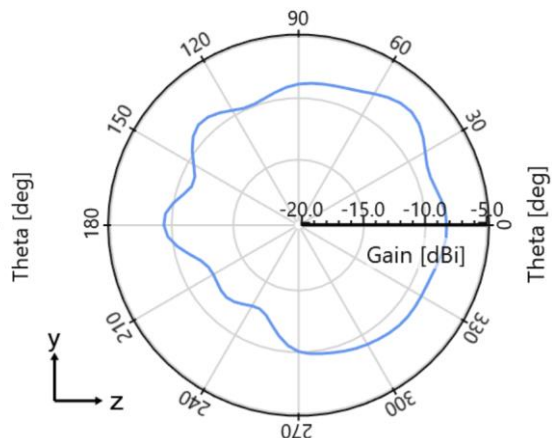
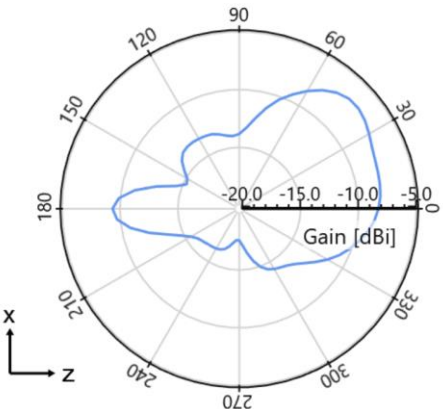
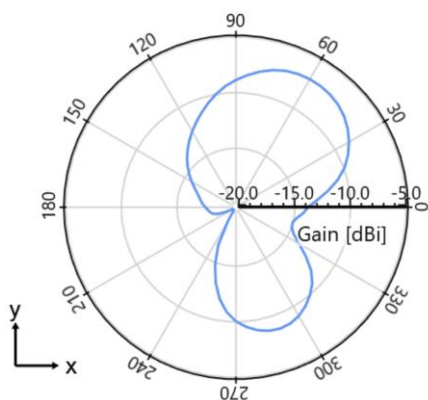
Antenna Radiation Patterns – Low Band cont.



Antenna Radiation Patterns – High Band



High Band measured at
1850 MHz



Mechanical Dimensions

Typical antenna dimensions (mm)

Part Number	A (mm)	B (mm)	Thickness (mm)
9003205	34.1 ± 0.3	19.6 ± 0.3	$0.3 \pm 10\%$

