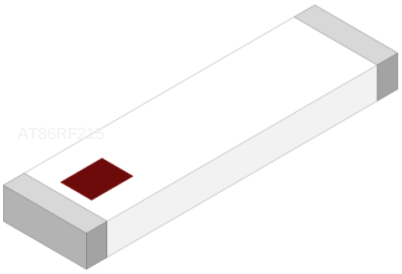
High Frequency Ceramic Solutions

LTE Multi-Band Ceramic Antenna, SMD **P/N: 0830AT54A2200**

Detail Specification: 2/19/2018

General Specifications

Part Number	0830AT54A2200	
Antenna Matching*	**Tuning Version 1**	**Tuning Version 2**
Frequency (MHz)	700 - 800	824 - 960
	1700 - 2100	1710 - 2690
Return Loss (dB)	3.5 min.	4.5 min.
Peak Gain (dBi)	2.0 typ.	2.0 typ.
Average Gain (dBi)	-1.6 typ.	-1.0 typ.
Power Capacity (W)	3 max. (CW)	
Quantity/Reel	500	
Operating Temperature	-40°C to +85°C	
Storage Temperature	-40°C to +85°C	
Storage Conditions for unused product on T&R and max shelf period	+5 ~ +35 °C Humidity 45~75%RH 18 mos. Max	



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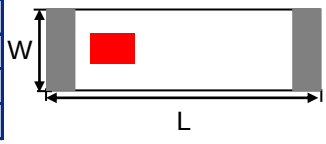
*Versions 1 and 2 represent impedance matches optimized for different frequency bands

Part Number Explanation

P/N Suffix	**Packing Style**	Bulk	Suffix = S	eg. 0830AT54A2200S
		T & R	Suffix = E	eg. 0830AT54A2200E
		100% Tin	Suffix = None	eg. 0830AT54A2200(E or S)
	Evaluation Board	(Version 1) 0830AT54A2200-EB1SMA, (Version 2) 0830AT54A2200-EB2SMA		

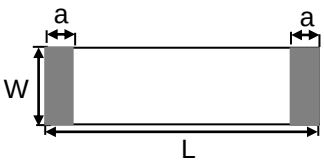
Mechanical Dimensions

	In	mm
L	0.591 ± 0.008	15.00 ± 0.2
W	0.157 ± 0.008	4.00 ± 0.2
T	0.059 ± 0.008	1.50 ± 0.2
a	0.039 ± 0.012	1.00 ± 0.3



Top View

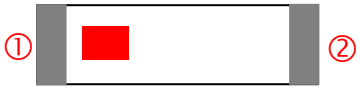
Side View



Bottom View

Terminal Configuration

No.	Function
1	FEED
2	NC



Pin 2 must be soldered onto the PCB for mechanical stability

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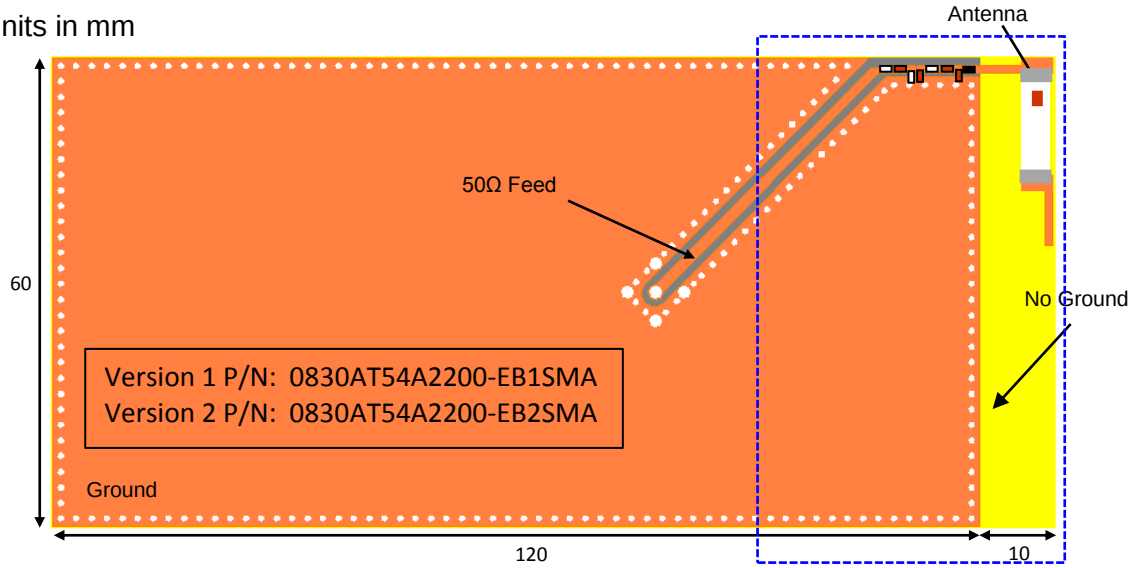
Mounting Consideration: Evaluation PCB (Versions 1 and 2)

Units in mm



Units in mm

It is recommended that the designer leave available slots for the topology of the network to the right. These particular antenna matching values are used when antenna is mounted on Johanson's evaluation board. The matching values on client's PCB will be different, just leave them empy until final assembly, then tune.
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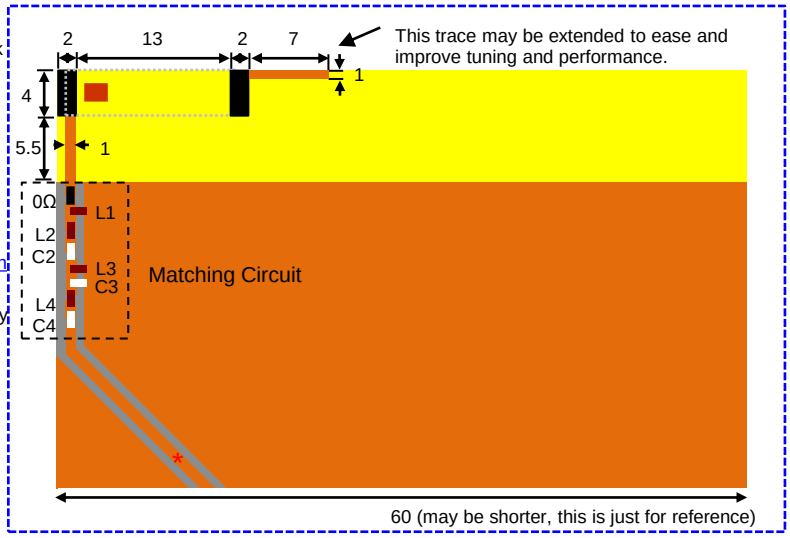

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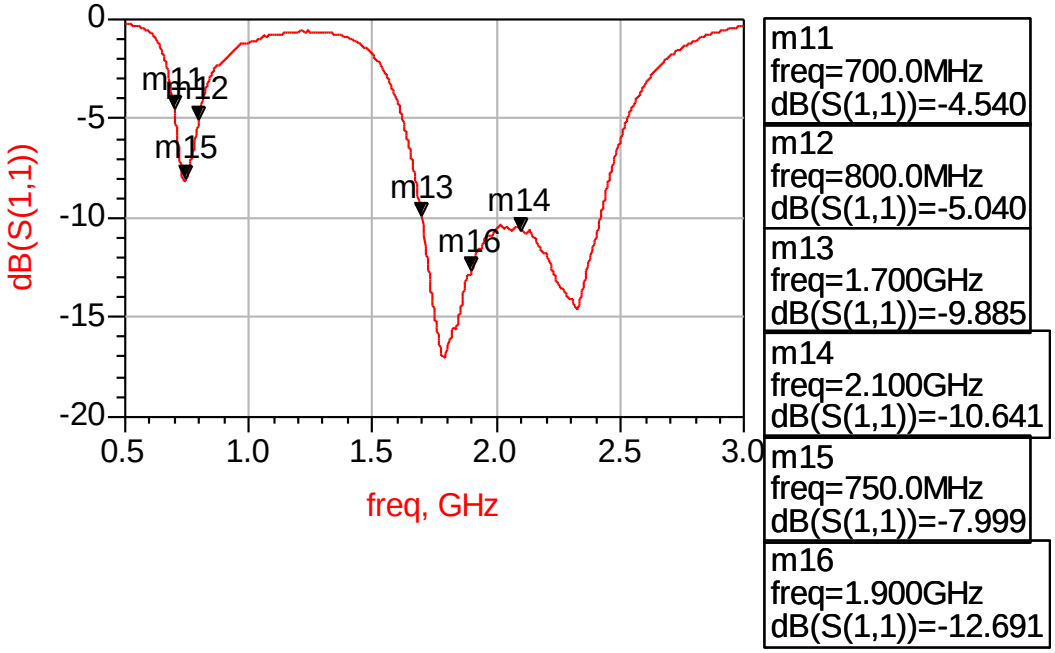
Typical Electrical Characteristics (T=25°C)

"Version 1" Evaluation PCB 0830AT54A2200-EB1SMA



To order a pre-tuned 50Ω EVB with a female SMA connector for "Tuning Version 1" click here: www.johansontechnology.com/request-a-sample
Reference p/n: 0830AT54A2200-EB1SMA

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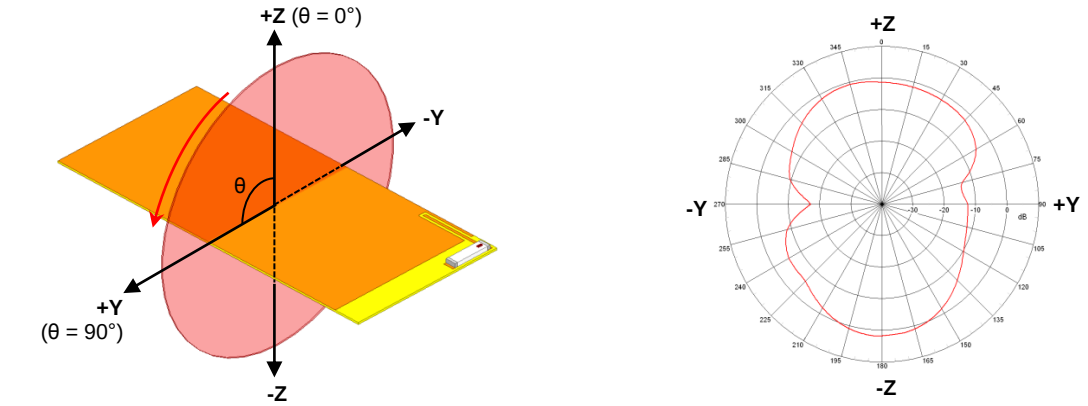
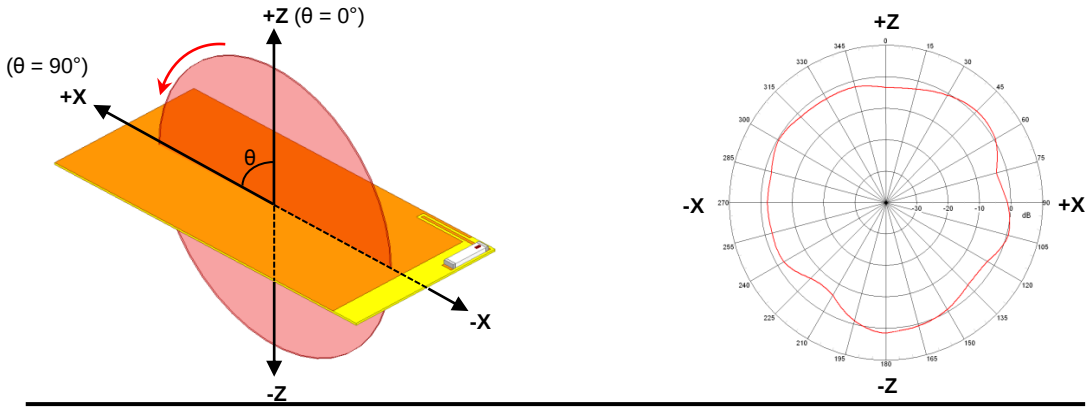
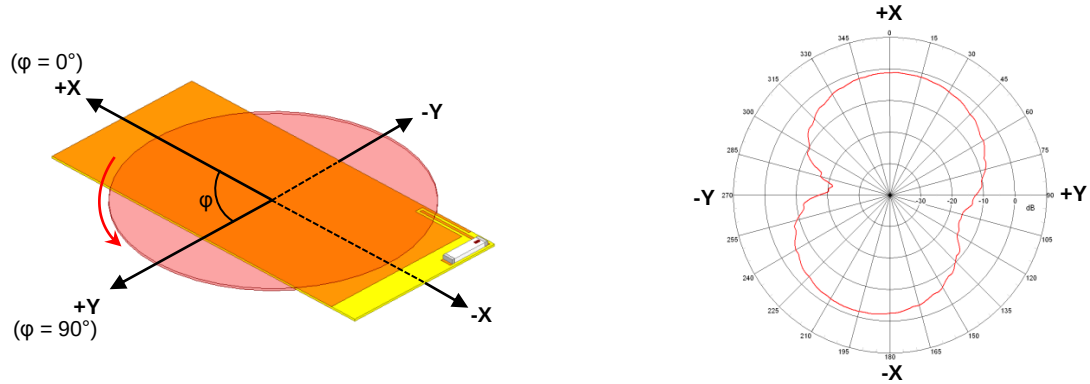
Mounting Consideration: Evaluation PCB "Version 1" P/N 0830AT54A2200-EB1SMA

Typical 2D radiation patterns @ 750MHz







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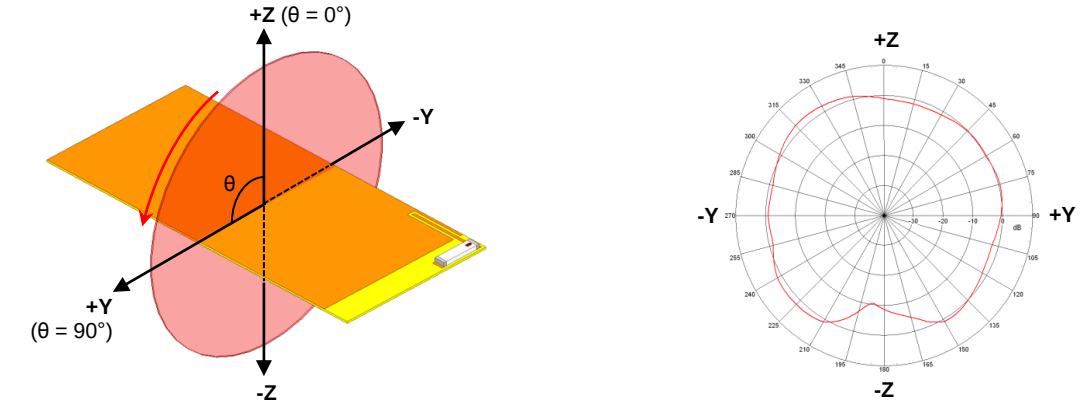
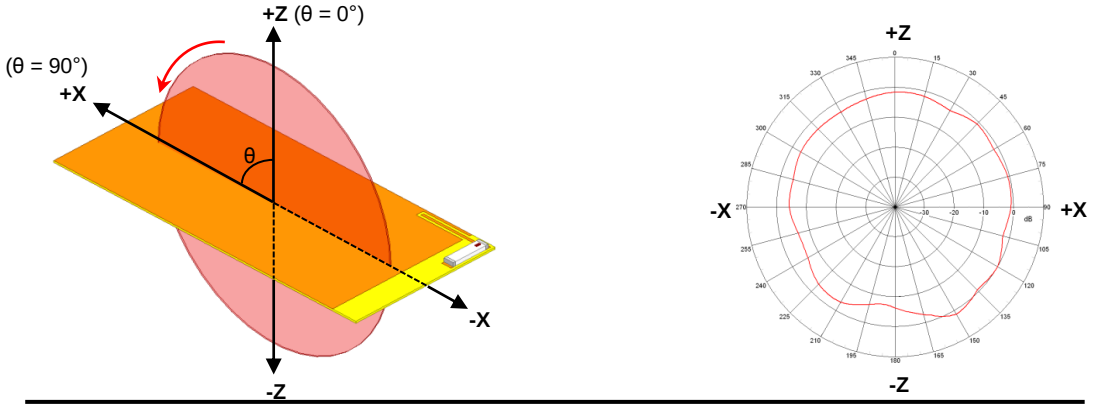
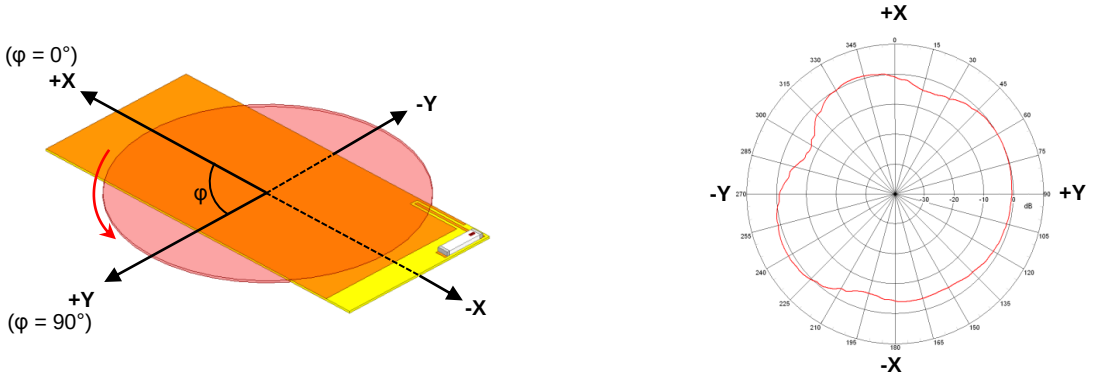
Mounting Consideration: Evaluation PCB "Version 1" P/N 0830AT54A2200-EB1SMA

Typical 2D radiation patterns @ 1900MHz







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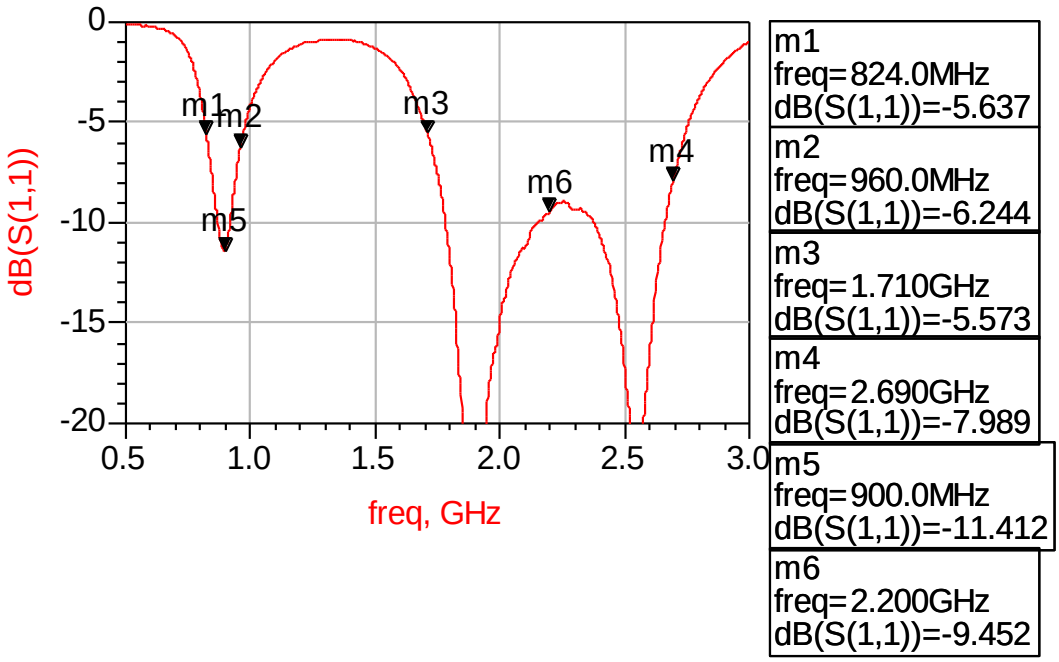
Typical Electrical Characteristics (T=25°C)

"Version 2" Evaluation Board 0830AT54A2200-EB2SMA



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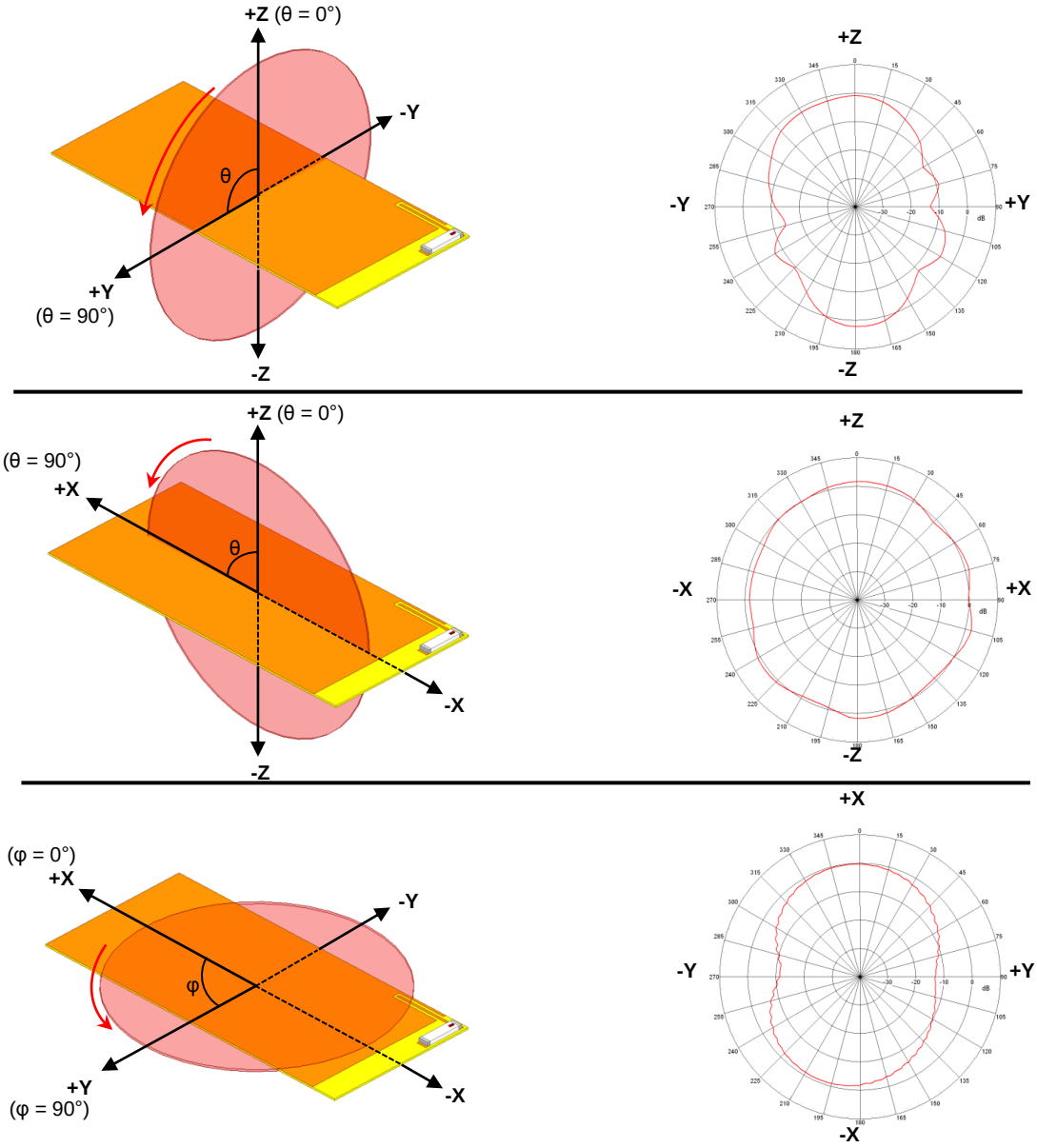
Mounting Consideration: Evaluation PCB "Version 2" P/N 0830AT54A2200-EB2SMA

Typical 2D radiation patterns @ 900MHz



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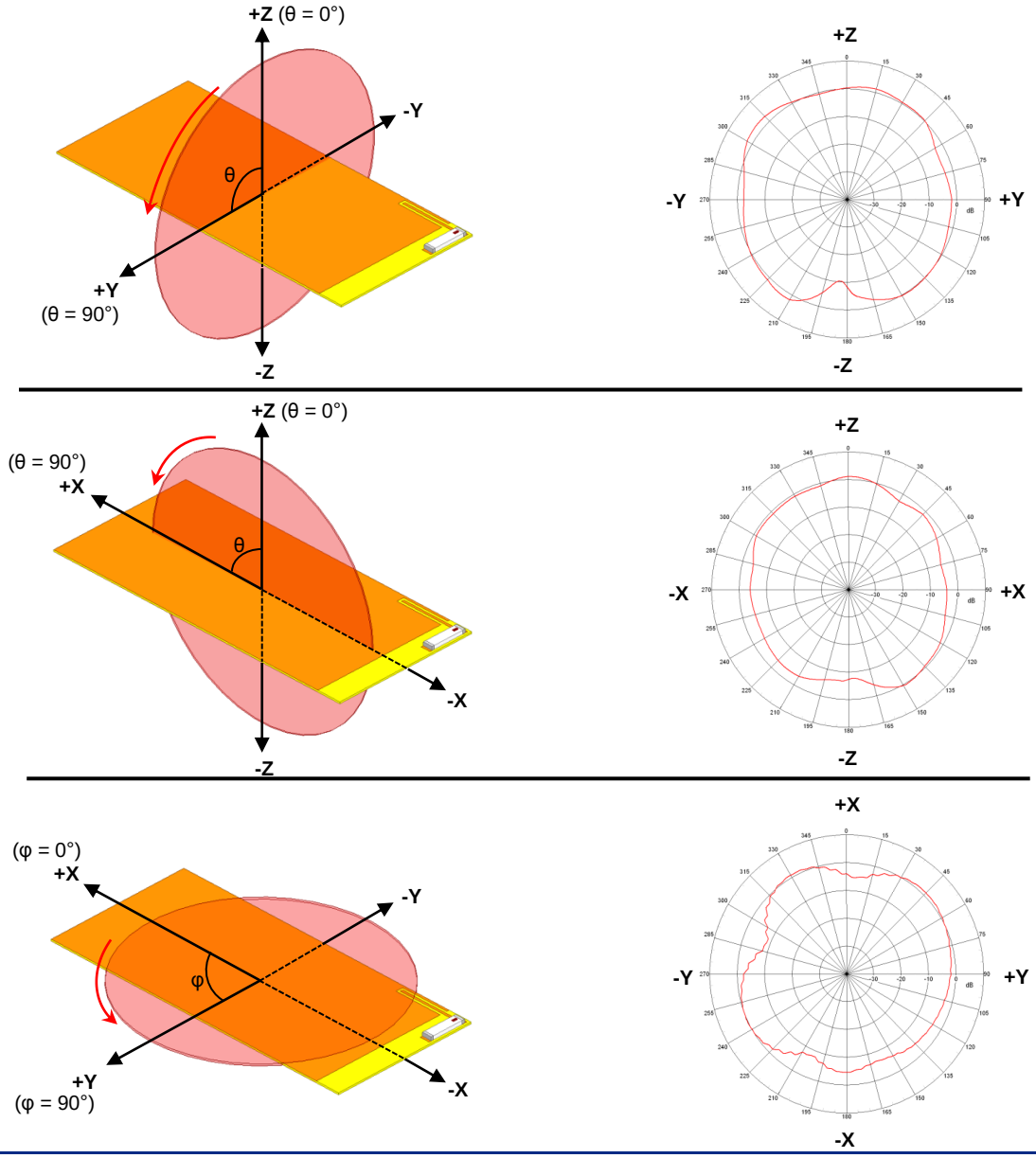
Mounting Consideration: Evaluation PCB "Version 2" P/N 0830AT54A2200-EB2SMA

Typical 2D radiation patterns @ 2200MHz



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