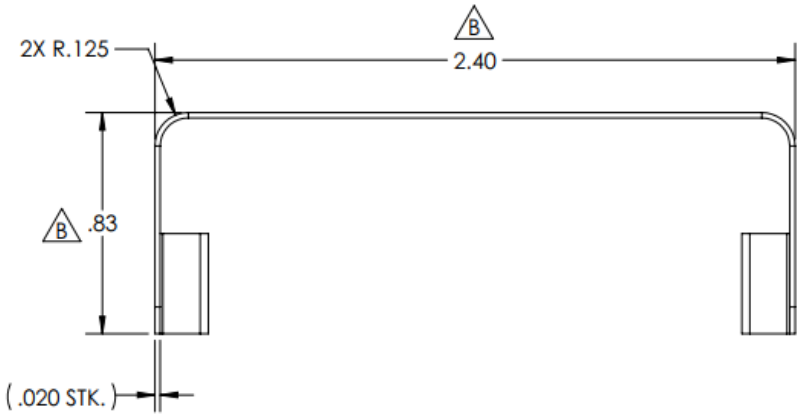
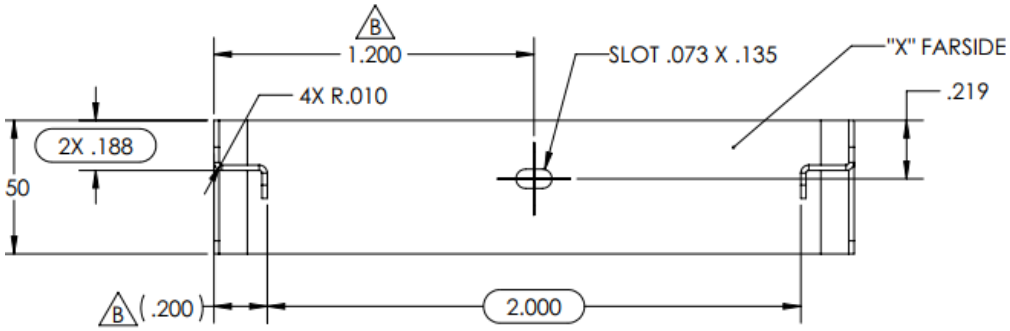
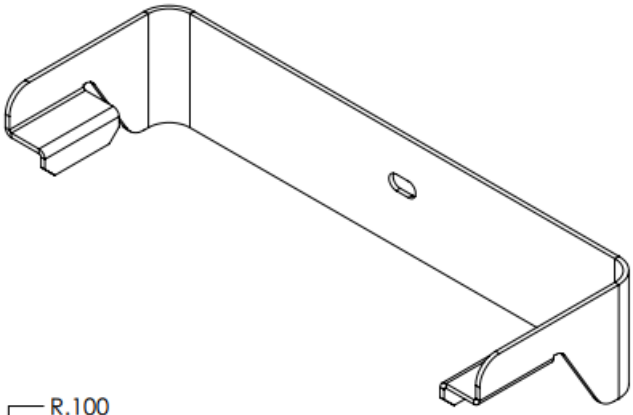
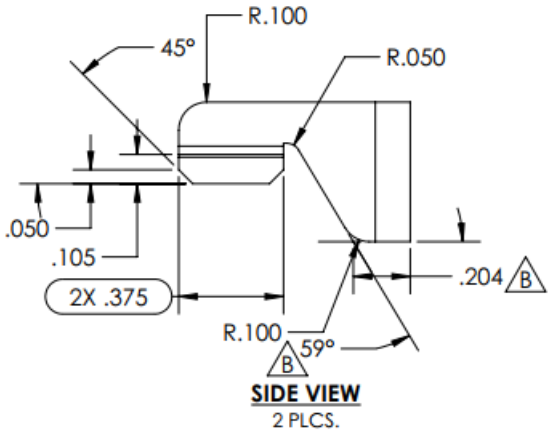
UHF (450-470 MHz) Antenna Information









SIDE VIEW
2 PLCS.

NOTES: (UNLESS OTHERWISE SPECIFIED)

1. MATERIAL:.020 THK. C11000 COPPER ALLOY, TEMPER CR HARD H04
2. FINISH: .0001/.0003 BRIGHT ACID TIN
3. REMOVE ALL BURRS AND SHARP EDGES
4. PARTS TO BE INDIVIDUALLY PACKAGED FOR PROTECTION
5. SURFACE "X" MUST BE SMOOTH AND FLAT. NICKS, SCRATCHES, TOOL MARKS ARE NOT PERMISSIBLE.
6. ALL MATERIALS AND PROCESSES SHALL COMPLY WITH EU DIRECTIVE 2011/65/EU {ROHS2} AND AS AMMENDED BY 2015/863/EU {ROHS3}.

Peak Antenna Gain is 5 dBi
Manufactured by Aclara as per Drawing No. 056-2022-002A

BLE Antenna Information

General Specifications	
Part Number	2450AT18D0100
Frequency (GHz)	2.4 - 2.5
Peak Gain (dBi)	1.5 typ. (XZ-total)
Average Gain (dBi)	-1.0 typ. (XZ-total)
Radiated Efficiency[1]	72%
Return Loss (dB)	10 min.
Impedance (Ω)	50
Input Power (W)	3 max. (CW)
Operating Temperature	-40 to +125°C

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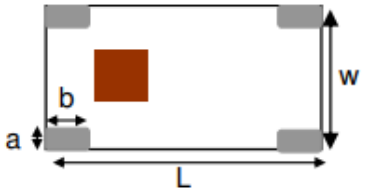
Recommended Storage Conditions and Period for unused Product on T&R	+5 to +35°C Humidity 45 - 75% RH 18 months max.
Quantity/Reel (pcs.)	3,000

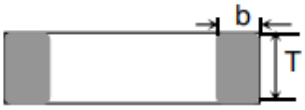
[1]Efficiency measured on Johanson's evaluation board PN 2450AT18D0100-EB1SMA

Part Number Explanation				
P/N Suffix	Packing Style	Bulk (loose pcs.)	Suffix = S	e.g. 2450AT18D0100S
		T & R	Suffix = E	e.g. 2450AT18D0100E
		100% Tin	Suffix = None	e.g. 2450AT18D0100(E or S)
	Evaluation Board	2450AT18D0100-EB1SMA		

Mechanical Dimensions

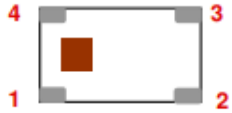
	In	mm
L	0.126 ± 0.008	3.20 ± 0.2
W	0.063 ± 0.008	1.60 ± 0.2
T	0.047 ± 0.004	1.20 ± 0.1
a	0.012 +0.004 / -0.008	0.30 +0.1 / -0.2
b	0.020 ± 0.008	0.50 ± 0.2





Terminal Configuration

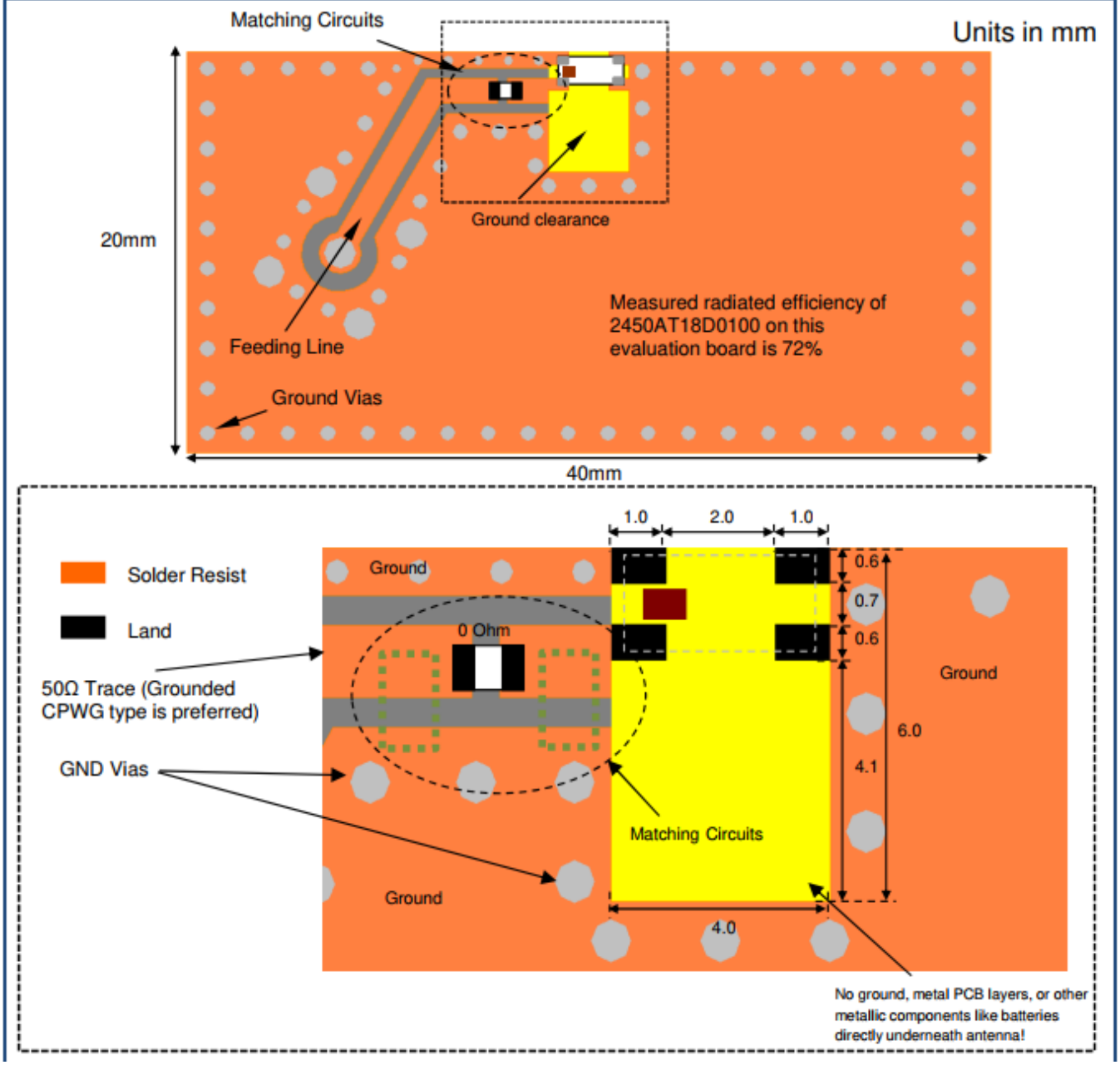
No.	Function 1	Function 2
1	FEED	GND
2	GND	GND
3	GND	GND
4	GND	FEED



Function 1: Antenna fed from left

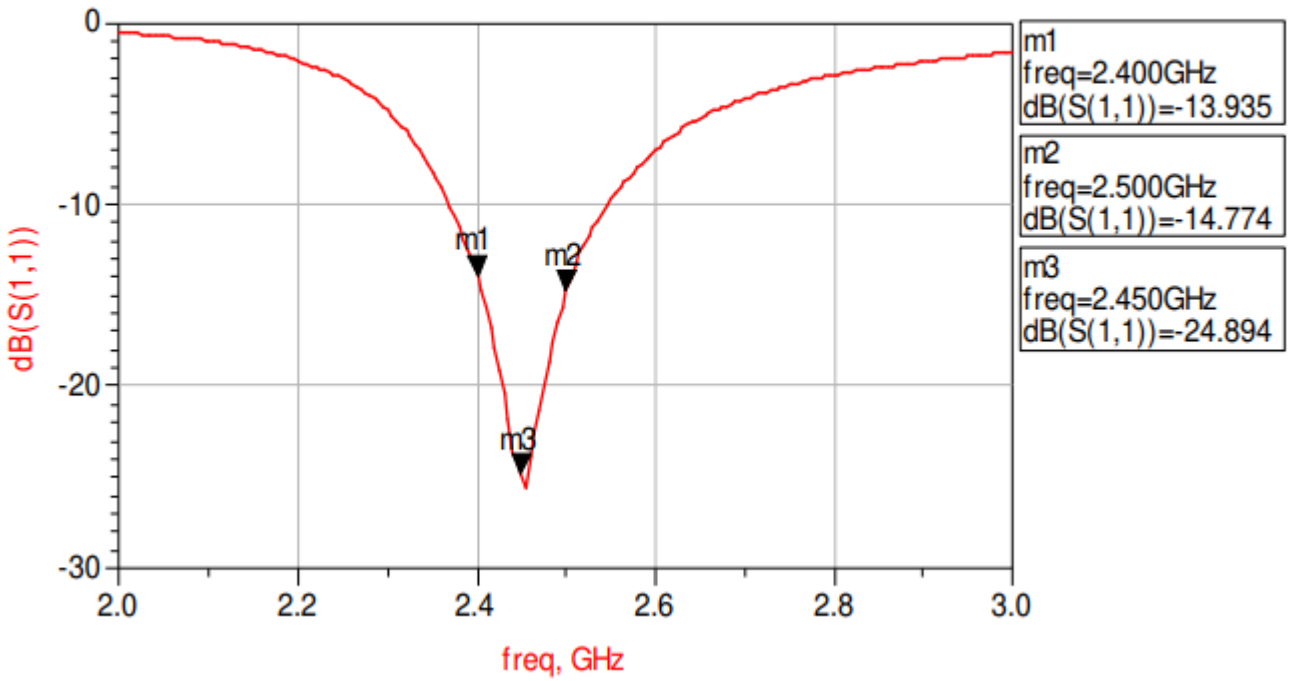
Function 2: Antenna fed from right

Mounting Considerations 1: Evaluation Board (Standard Layout)



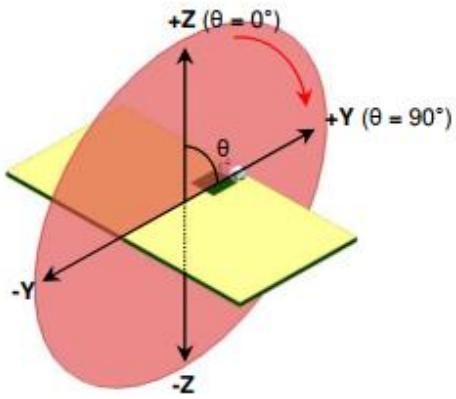
Mounting Considerations 1: Electrical Performance @25°C

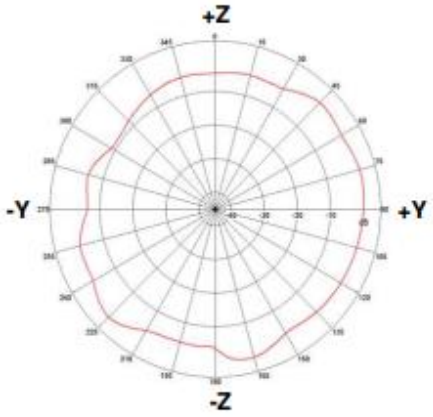
Measured Return Loss



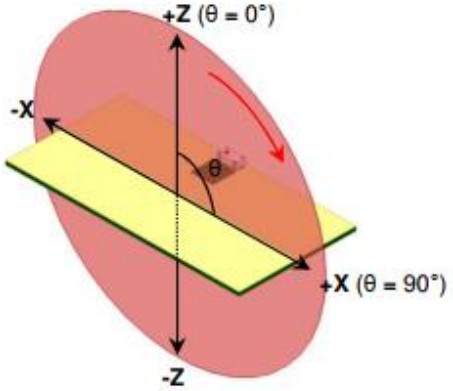
Mounting Considerations 1: Typical 2D radiation patterns @ 2.44GHz

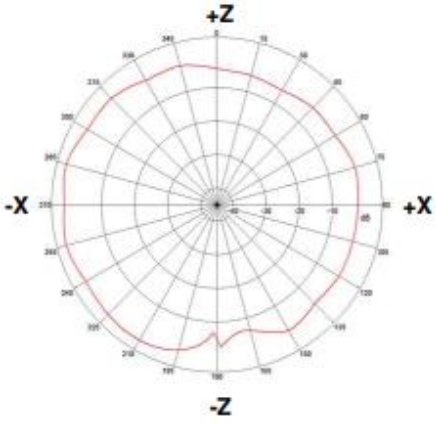
YZ-plane



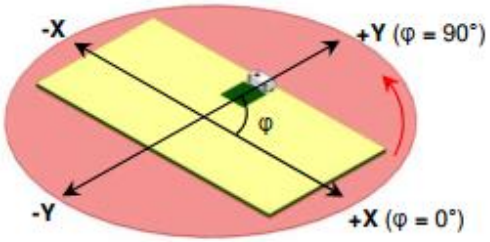


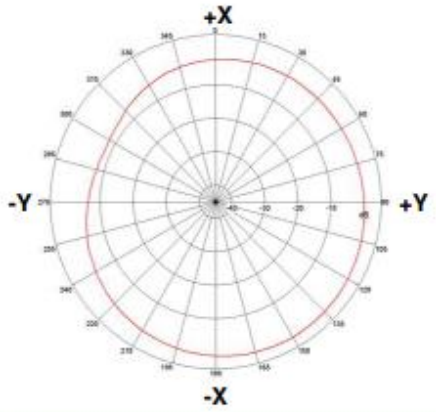
XZ-plane



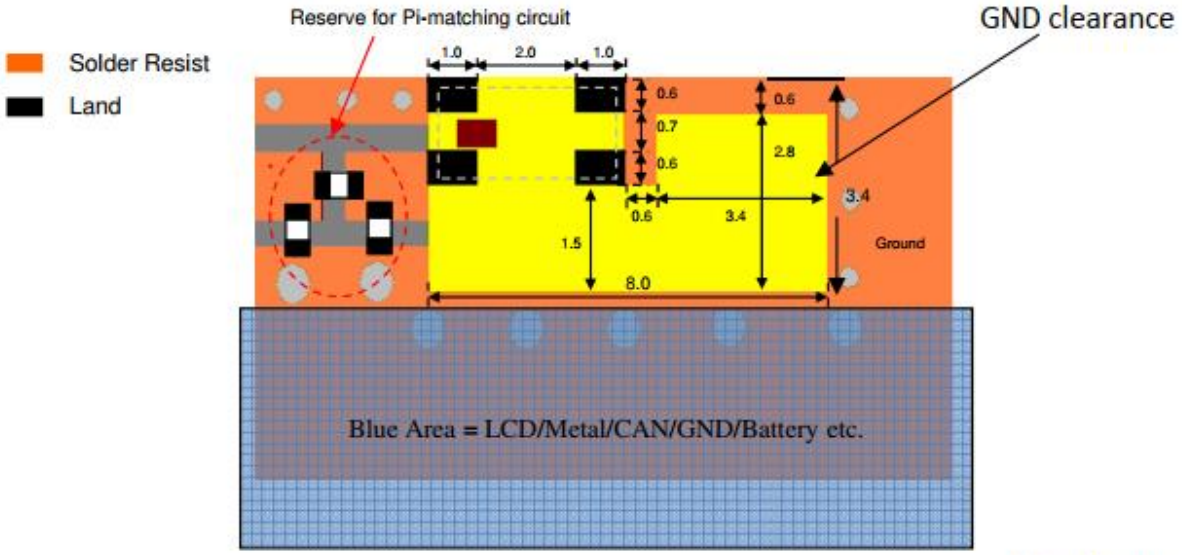


XY-plane





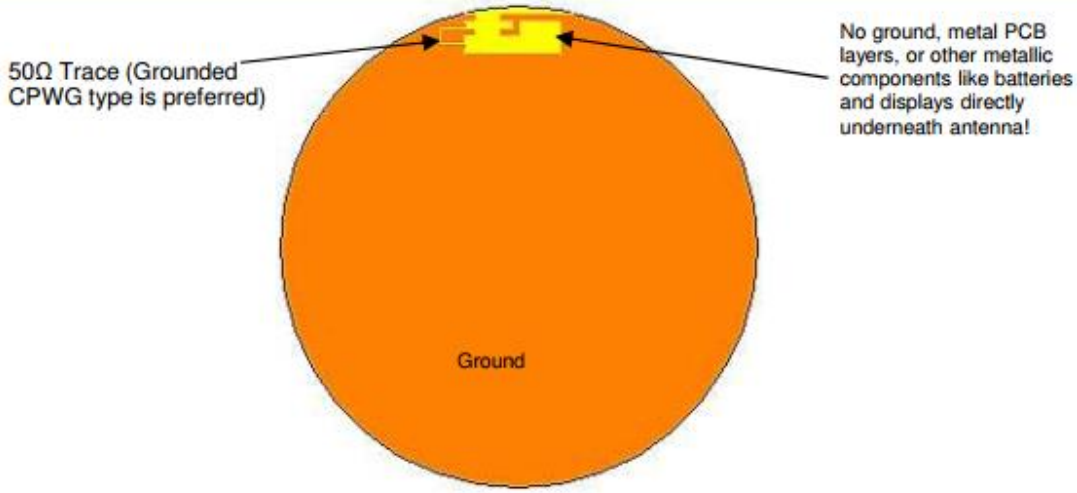
Mounting Considerations 2: Small Clearance or "Thin edge" Applications*



Units in mm

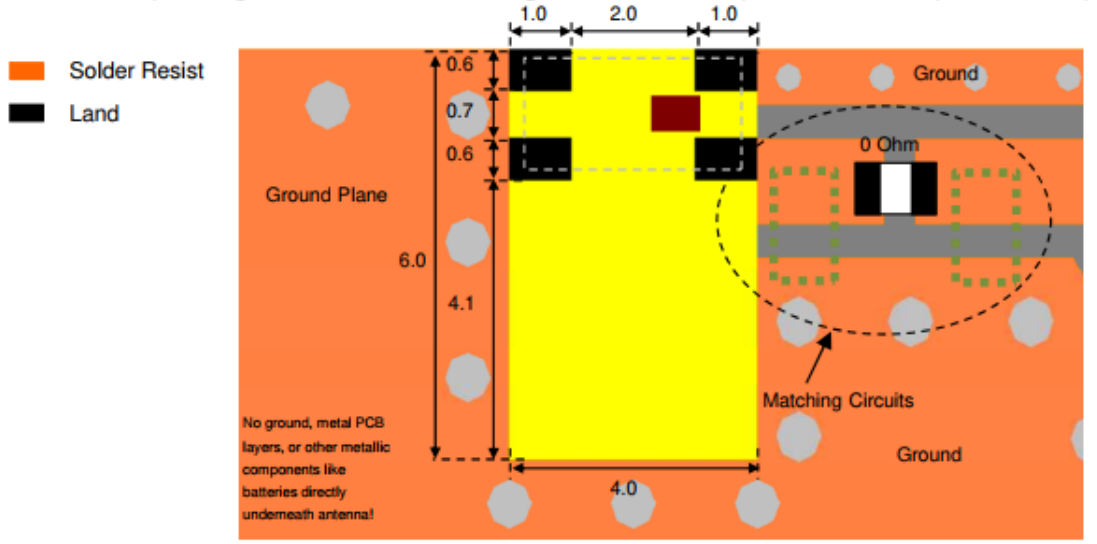
*Evaluation board not available

Mounting Considerations 3: "Thind edge" application on circular PCB



Mounting Considerations 4: Fed from Right Side*

(Feeding the antenna from the right will have no impact on antenna performance)



Units in mm

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Ver. 4.3

High Frequency Ceramic Solutions

2.45 GHz SMD Antenna, EIA 1206, Detuning resilient, Edge Mount Design

Detail Specification: 2/11/2021