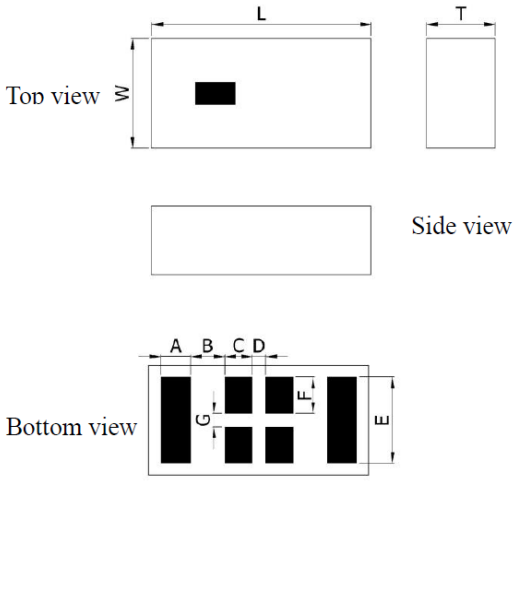
RCA-W2A1-1608-W-001

ELECTRICAL SPECIFICATION

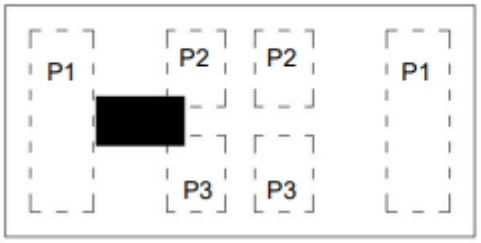
PARAMETERS		VALUE	UNIT
Frequency Range		2400 ~ 2500	MHz
Gain, typ		1.5	dBi
VSWR, max	@ 2400 ~ 2500 MHz	4.5 : 1	-
Polarization		Linear	-
Azimuth Beamwidth		Omni-directional	-
Impedance		50	Ω
HBM ESD	Pass on all pins (Base on AECQ200-002)	1	kV
MM ESD	Pass (Base on EIA/JESD22-A115)	200	V
Operating Temperature Range		-40 ~ +85	˚C
Storage Temperature Range		-40 ~ +85	˚C
Storage Condition before Soldering (Included packaging material)	Storage Temperature Range	+5 ~ +40	°C
	Relative Humidity	30 ~ 70	%

MECHANICAL SPECIFICATION

Figure	Symbol	Dimension (mm)
	L	1.60 ± 0.15
	W	0.80 ± 0.15
	T	0.50 ± 0.10
	A	0.22 ± 0.10
	B	0.25 ± 0.10
	C	0.20 ± 0.10
	D	0.10 ± 0.05
	E	0.63 ± 0.10
	F	0.265 ± 0.10
	G	0.10 ± 0.05

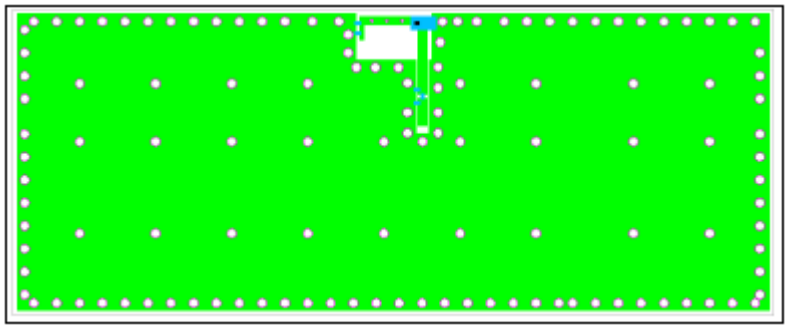
CONSTRUCTION

Top view

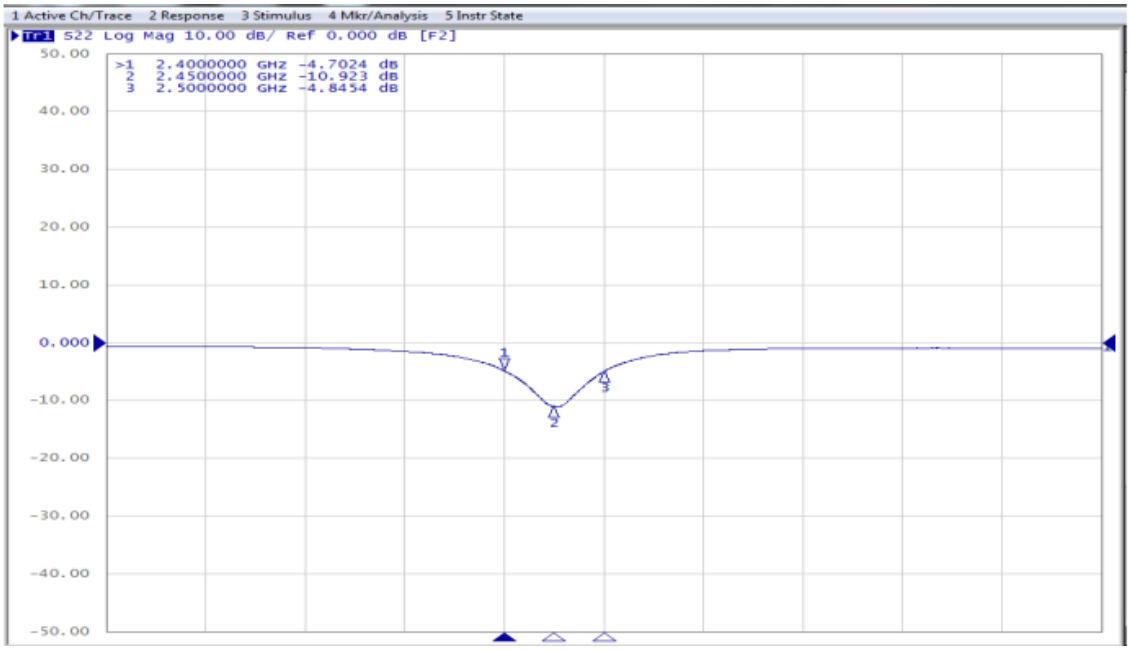


PIN	Connection
P1	Solder Pin
P2	Solder Pin
P3	Feeding

- **TEST BOARD (Thickness 0.8 mm)**



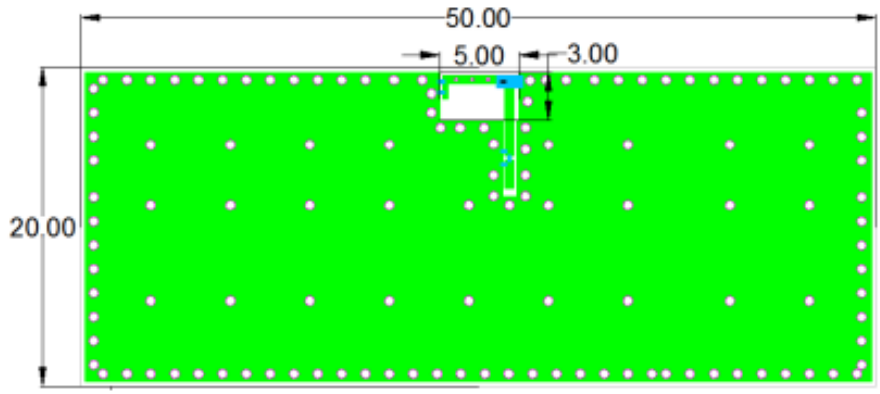
ANTENNA S11 on Test Board



SOLDER LAND PATTERN DESIGN

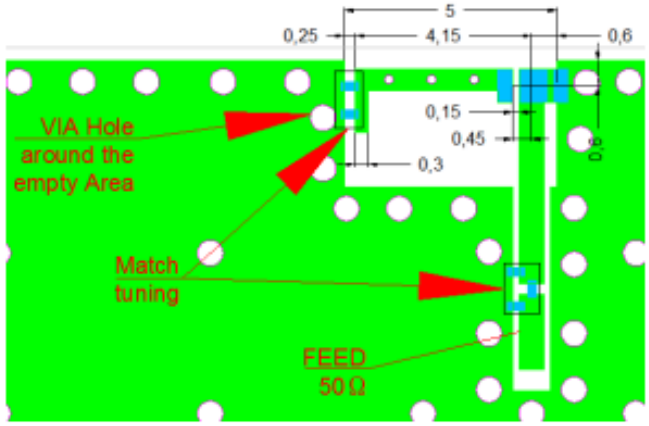
Figure (Empty Space 3.0 mm x 5.0 mm)

Unit : mm

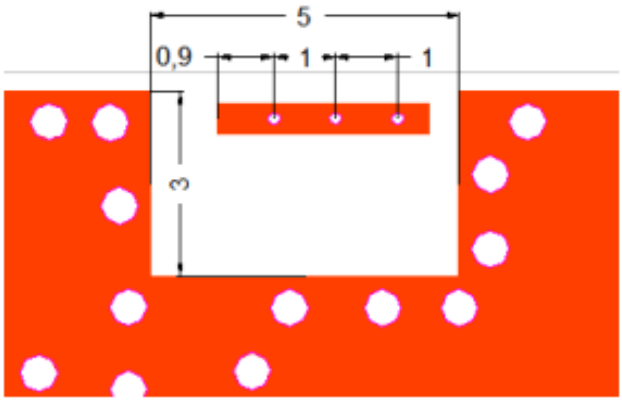


Land pattern

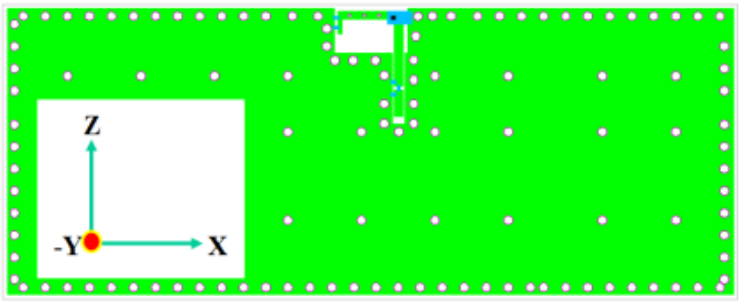
TOP



Bottom



RADIATION PATTERN



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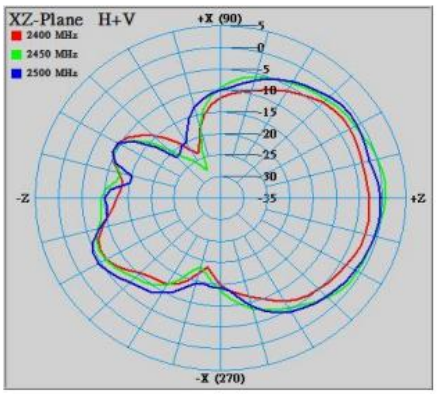
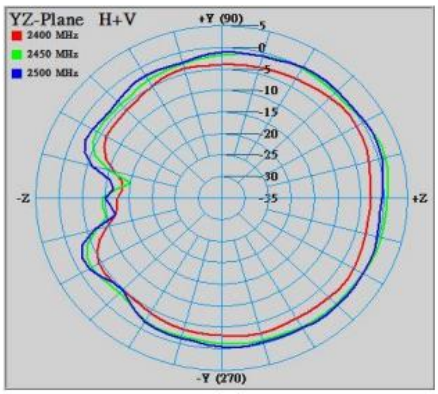
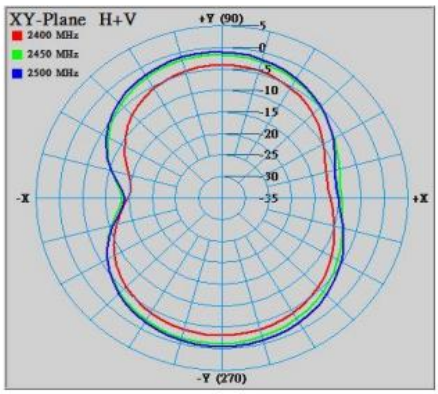
2.4GHz

(XZ plane)	(YZ plane)	XY plane
		

	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
2400	**-2.54**	**-7.06**	**-1.39**	**-3.79**	**-3.08**	**-6.34**
2450	**0.65**	**-4.87**	**1.48**	**-1.53**	**-1.22**	**-4.21**
2500	**-0.37**	**-5.03**	**0.86**	**-1.35**	**-0.47**	**-3.63**

ENVIRONMENTAL

PARAMETER	VALUE
RoHS	Compliant
REACH SVHC	Compliant
HALOGEN-FREE	Compliant

APPROVAL

RALTRON	
DRAWN BY:	AR, April 02, 2024
APPROVED BY:	CP, April 02, 2024
REVISION:	A, Initial Release