

#### ELECTRICAL SPECIFICATION

PARAMETERS	VALUE	UNIT
Center Frequency	433	MHz
Bandwidth, typ	28	MHz
Peak Gain, typ	0.79	dBi
Return Loss, min	6.5	dB
Polarization	Linear	-
Azimuth Beamwidth	Omni-directional	-
Power, max	1	W
Impedance	50	$\Omega$
Operating Temperature Range	-40 ~ +105	$^{\circ}\text{C}$

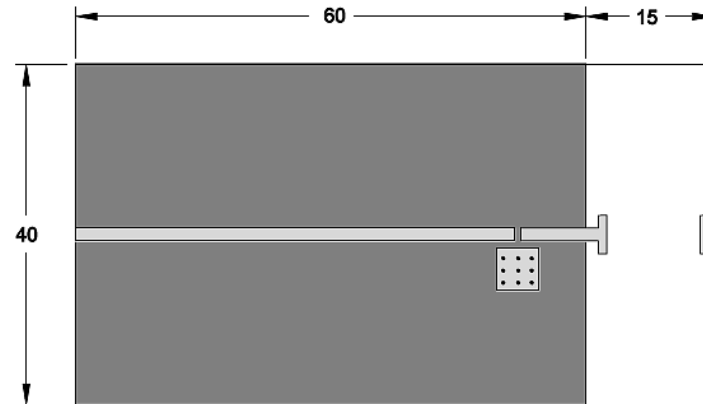
#### MECHANICAL SPECIFICATION

The mechanical drawing illustrates the chip antenna from four perspectives: a 3D perspective view, a Top View, a Side View, and a Bottom View. The Top View shows a rectangular shape with length  $L$  and width  $W$ . The Side View shows the thickness  $T$ . The Bottom View shows the antenna's profile with a width  $A$  and two connection points labeled  $S1$  and  $S2$ .

	L	W	T	A
Dimension (mm)	$12.30 \pm 0.20$	$4.00 \pm 0.20$	$1.60 \pm 0.20$	$0.50 \pm 0.20$

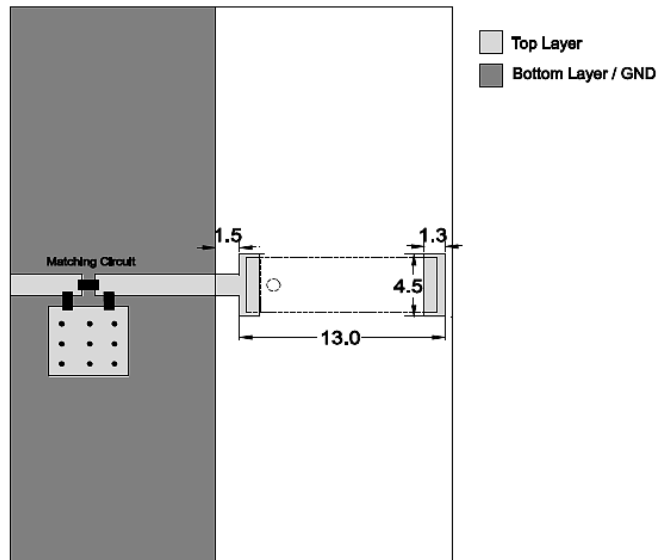
	S1	S2
Connection	Feeding	Soldering

#### EVALUATION BOARD



Unit: mm

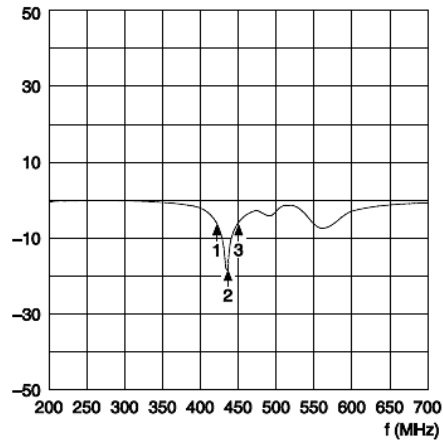
#### RECOMMENDED SOLDERING PATTERN



Unit: mm

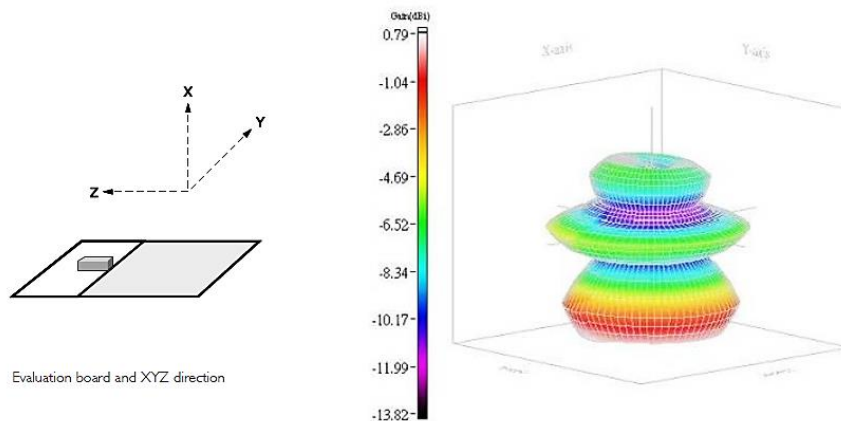
#### FREQUENCY CHARACTERISTICS

##### Return Loss



Marker data  
 1. 419MHz, -6.5dB  
 2. 433MHz, -16dB  
 3. 447MHz, -6.5dB

#### RADIATION PATTERN



Frequency= 433 MHz  
 Max gain = 0.79 dBi, at (150,330)  
 MEG (mean effective gain)= -4.84 dBi  
 Directivity (dB) = 6.35  
 Efficiency = -5.56dB, 27.79 %



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# CHIP ANTENNA

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RCA-W1A0-1204-Z-001

• APPROVAL

RALTRON	
DRAWN BY:	LP, June 08, 2017
APPROVED BY:	JL, June 08, 2017
REVISION:	A, Initial Release

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