Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

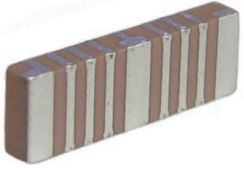
With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

RFID Chip Antenna



9.0 x 3.0 x 1.2 mm

ACAJ-110-T

RoHS / RoHS II Compliant

Moisture Sensitivity Level (MSL) – MSL = 1

FEATURES:

- Passive Dielectric Chip Antenna
- Covering dual ISM bands 868MHz and 915MHz
- SMA mount, Reflowable to 255 degrees C max.
- Compact Dimensions (9.0mm x 3.0mm x 1.2mm)
- Peak Gain – 868MHz -2.5dBi, 915MHz -2.7dBi
- VSWR 3.0:1 Max (measured on matched EV board)
- Impedance 50 Ohms
- Linear Polarization / Omni-directional azimuth pattern
- RoHS/RoHS II compliant

APPLICATIONS:

- ISM 868 / 915MHz
- Low power radio links
- Sensor networks
- For use with ultra low power transceiver IC's

STANDARD SPECIFICATIONS

ITEM		SPECIFICATION	
Frequency Range		868/915MHz	
VSWR		3.0: 1 Max	
Polarization		Linear	
Azimuth Beam Pattern		Omni-directional	
Impedance		50Ω	
Operating Temperature		-35ºC to + 85ºC	
Frequency [MHz]		868	915
Gain [dBi]	Peak	-2.5	-2.7
	Average	-3.4	-1.8
Efficiency [%]		34	37

The results are measured on the 100x50mm^2 evaluation board.

PART IDENTIFICATION:

ACAJ-110-□

Packaging
Blank: Bulk
T: Tape and Reel (1000 per reel)

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RFID Chip Antenna

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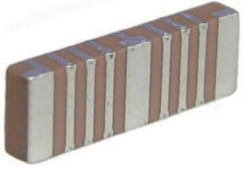
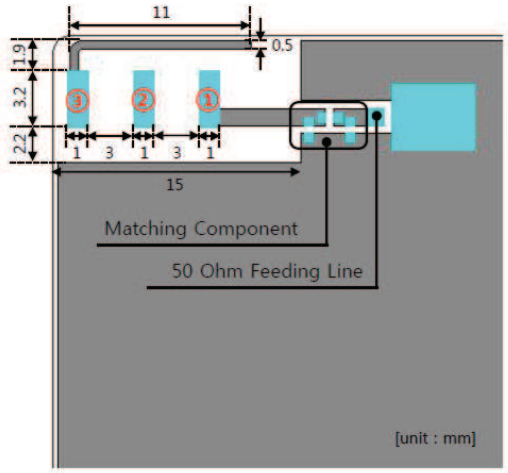
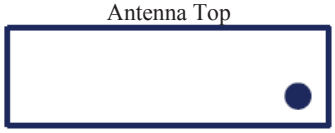


9.0 x 3.0 x 1.2 mm

PCB DESIGN GUIDE



Antenna Top

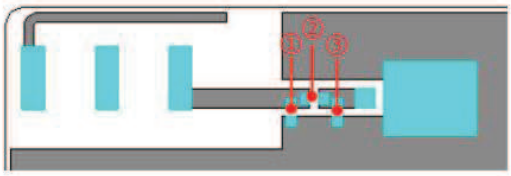


Antenna Bottom

NO	Pin Assignment
①	Feeding
②	N/C
③	N/C (Connected Stub line)

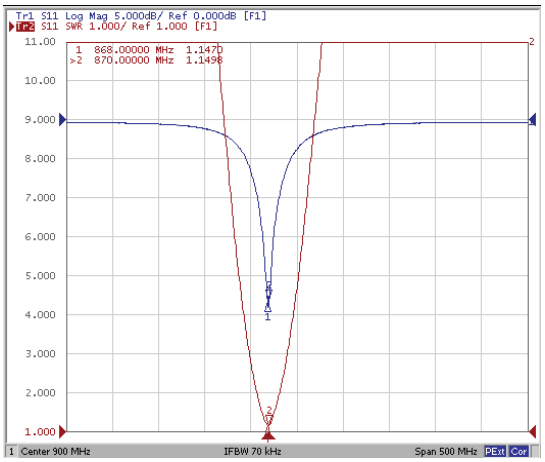
MEASUREMENT GUIDE

Typical Measurement Result (VSWR, RL & Smith Chart) @ 868MHz

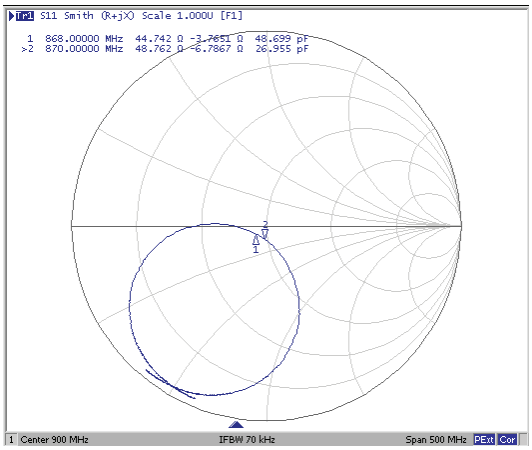


NO	Matching Value
①	N/C
②	15 nH
③	5.0 pF

Measured VSWR & Return-loss @868MHz



Measured Smith Chart @868MHz



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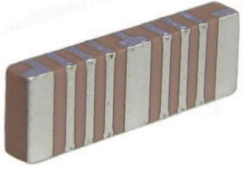
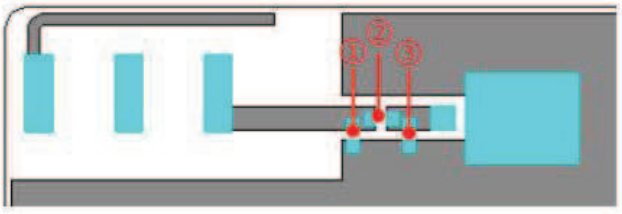


9.0 x 3.0 x 1.2 mm

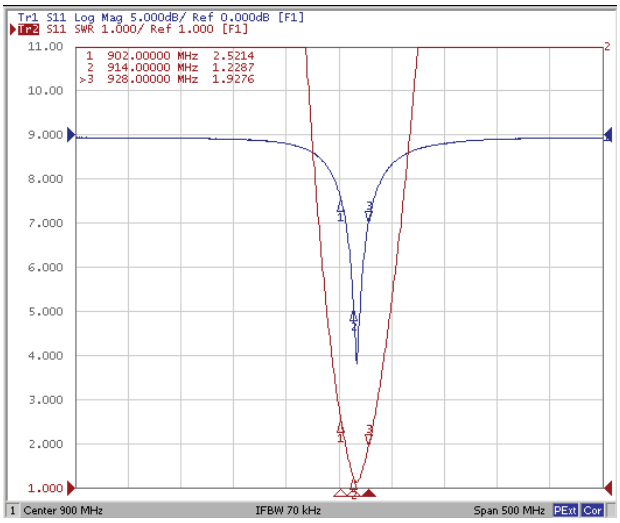
S11 (VSWR)- Penta Band (GSM850&900, DCS, PCS, U

Typical Measurement Result (VSWR, RL & Smith Chart) @ 915MHz

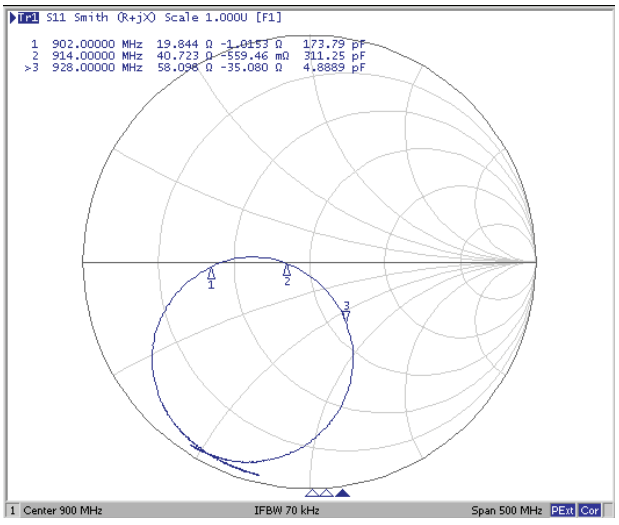


NO	Matching Value
①	N/C
②	8.2 nH
③	4.3 pF

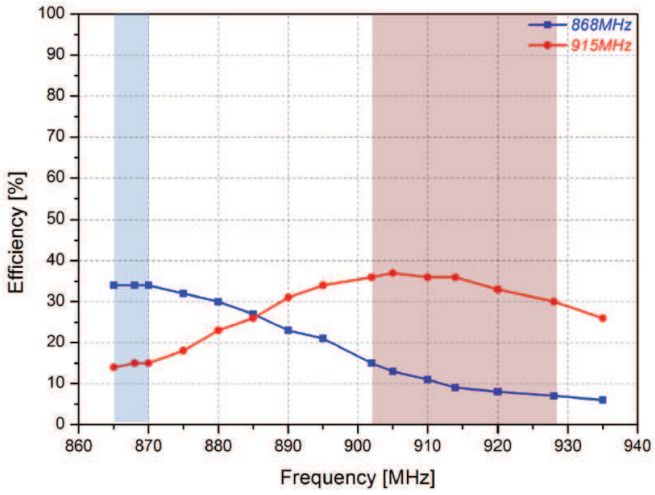
Measured VSWR & Return-loss @915MHz



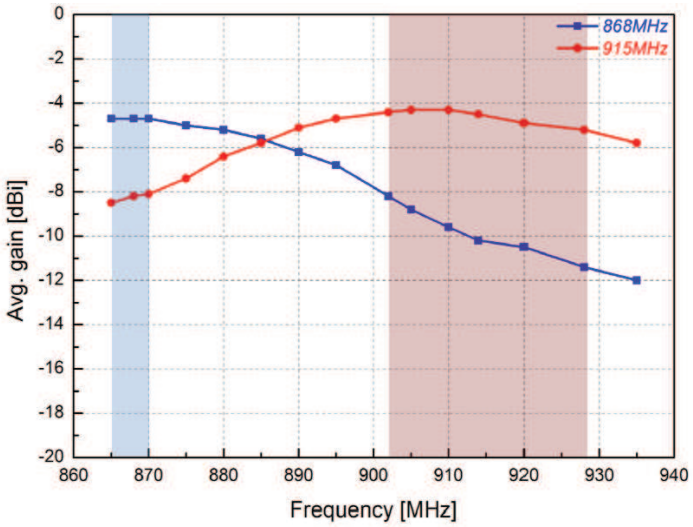
Measured Smith Chart @ 915 MHz



Measured Antenna Efficiency



Measured Average Gain



RFID Chip Antenna

ACAJ-110-T

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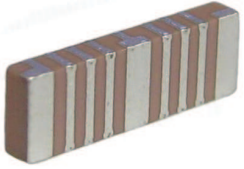
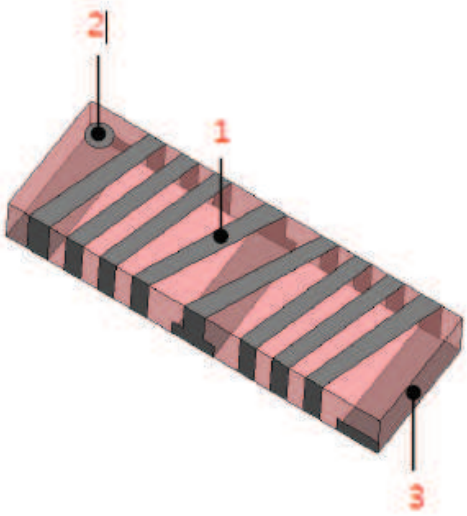
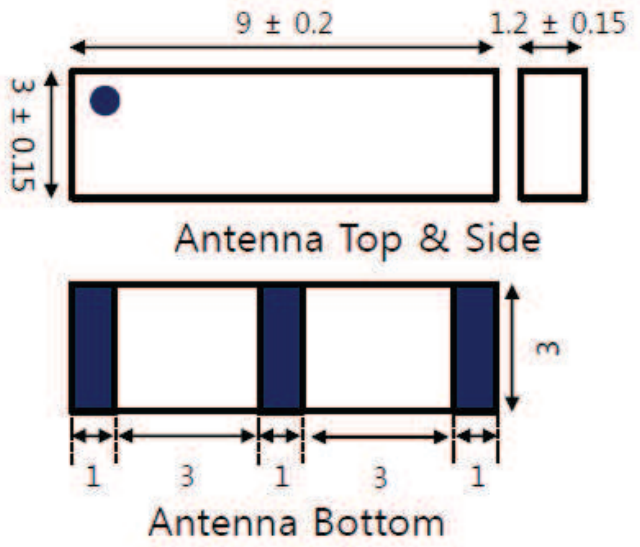


9.0 x 3.0 x 1.2 mm

OUTLINE DIMENSION:

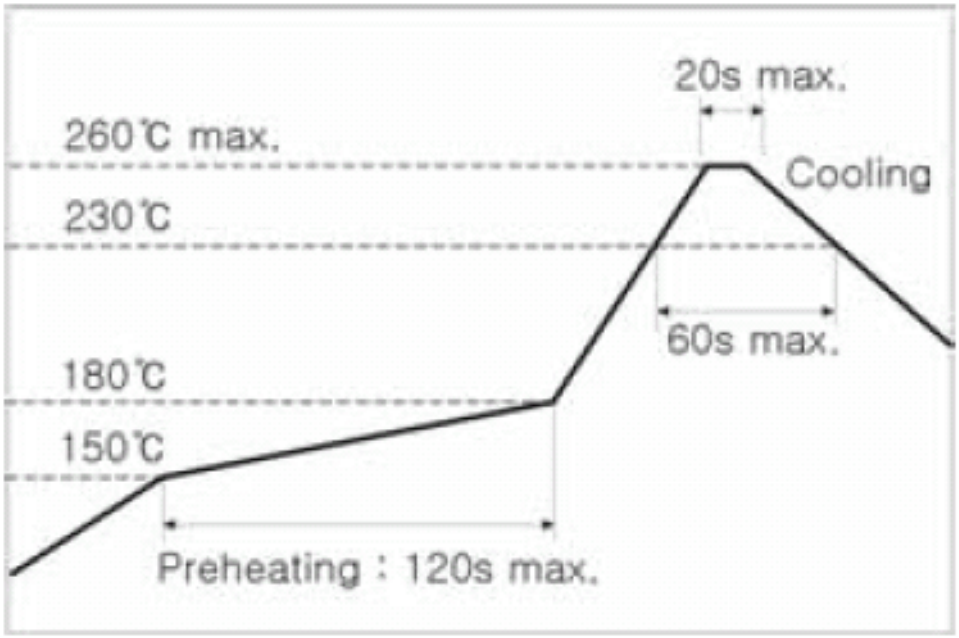




No	Name	Function	Material
1	Electrode	Radiation Element	Ag
2	Electrode	Identification Mark	Ag
3	Body	Dielectric Material	Ceramic

Unit: mm

REFLOW PROFILE:



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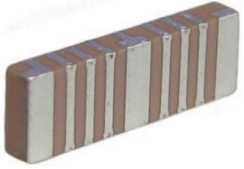
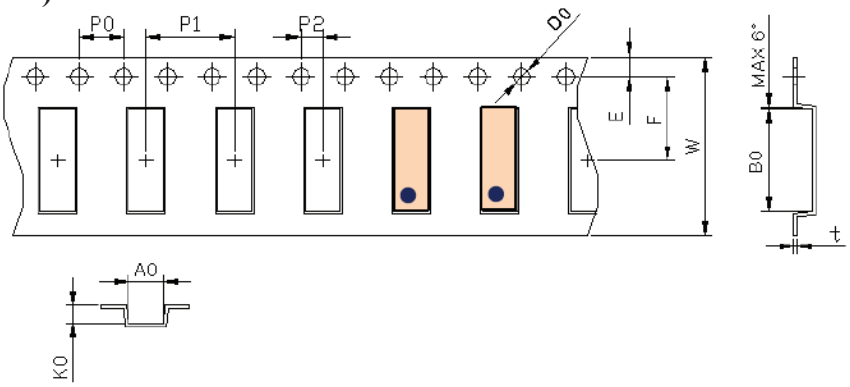


9.0 x 3.0 x 1.2 mm

TAPE & REEL:

Tape Dimensions (mm)



A0	3.20 ±0.10	P0	4.00 ±0.10	E	1.75±0.10
B0	9.20 ±0.10	P1	8.00 ±0.10	F	7.50 ±0.10
K0	1.65 ±0.10	P2	2.00 ±0.10	W	16.00 ±0.30
D0	1.55 ±0.05	-	-	t	0.30 ±0.05

Packing Quantity

Item	Quantity	Dimension
Reel	1,000 ea	Φ7" * 16mm

CAUTION:

Static voltage
Static voltage between signal & ground may cause deterioration & destruction of the component. Please avoid static voltage.
Ultrasonic cleaning
Ultrasonic vibration may cause deterioration & destruction of the component. Please avoid ultrasonic cleaning.
Soldering
Only leads of the component may be soldered. Please avoid soldering to any other part of the component, such as the Ag patterning as this will change the performance of the antenna.

NOTES:

i) The parts are manufactured in accordance with this specification. If other conditions and specifications which are required for this specification, please contact ABRACON for more information.
ii) ABRACON will supply the parts in accordance with this specification unless we receive a written request to modify prior to an order placement.
iii) In no case shall ABRACON be liable for any product failure from in appropriate handling or operation of the item beyond the scope of this specification.
iv) When changing your production process, please notify ABRACON immediately.
v) ABRACON LLC's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. ABRACON's products are not specifically designed for Military, Aviation, Aerospace, Lifedependant Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from ABRACON LLC is required. Please contact ABRACON LLC for more information.
vi) All specifications and Marking will be subject to change without notice.

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