

ANTENNA PRODUCTS

DATA SHEET

870MHz Ceramic Chip Antenna (12*4 mm)

Nov, 2006, V1

	Print date 06/11/29								
									Nov, 2006
	Multilayer Ceramic Antenna for 870 MHz (12*4mm)		CAN4311 129 070871K		CAN4311 129 080871K		CAN4311129 090871K		
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**MULTILAYER CERAMIC ANTENNA (LINEAR POLARIZATION MODE)
FOR 800MHz~900MHz**

Product Specification¹

QUICK REFERENCE DATA



Working Frequency*	800~900MHz
Bandwidth	20 MHz (Min)
Gain	0.5 dBi (Max)
VSWR	2.0 max
Polarization	Linear
Azimuth	Omni-directional
Impedance	50Ω
Operating Temperature	-40~125 °C
Termination	Ni/Sn (Environmentally-Friendly Leadless)
Resistance to soldering heat	260°C, 10 sec.

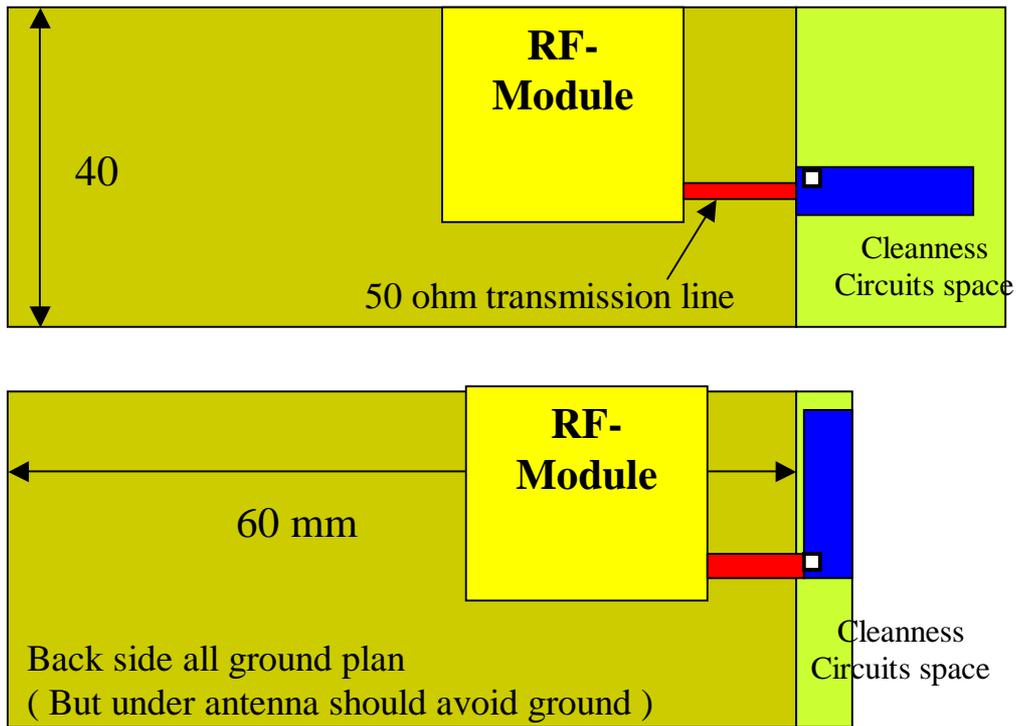


Special Environmental Concerns- Green Products Design: The foil making process is using environmentally friendly aqueous solvent technology. Termination is lead free and packing materials can be re-cycled

¹ All the technical data and information contained herein are subject to change without prior notice

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1. APPLICATION



2. SOLDER LAND PATTERN FOR ANTENNA

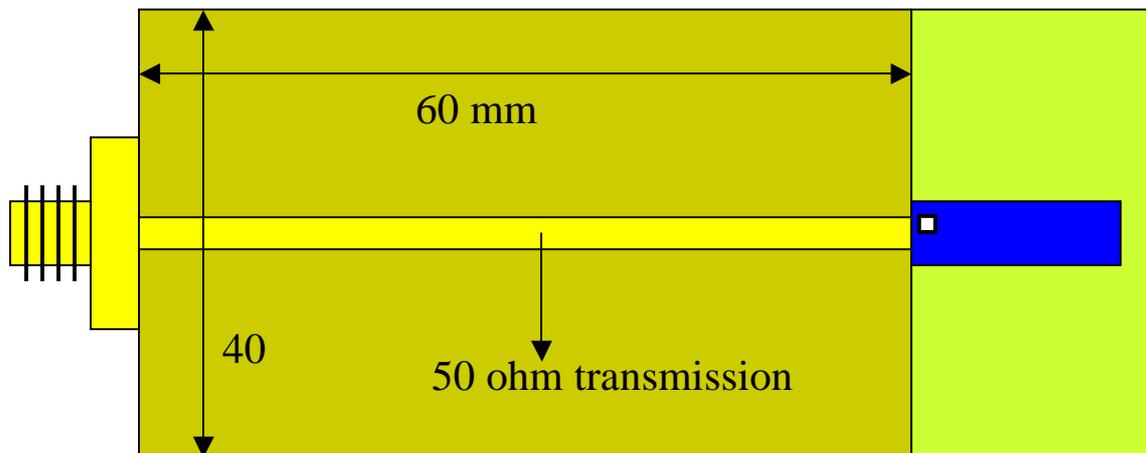
Figure	Dimensions	Remark
<p>The diagram shows a rectangular solder land pattern. The width is labeled 'W', the height is labeled 'F', and the length is labeled 'D'. There are also smaller dimension lines indicating the width and height of the pattern.</p>	<p>W $1.0 \pm 0.15 \text{ mm}$</p> <p>F $4.25 \pm 0.15 \text{ mm}$</p> <p>D $12.4 \pm 0.15 \text{ mm}$</p>	

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3. MECHANICAL DATA

Figure	Dimension	Port
	W 4.1±0.2mm L 12.1±0.2mm T 1.6±0.2mm F 0.85±0.35mm	Feed termination Solder termination

4. TEST BOARD DIMENSION FOR S_{11} (RETURN LOSS) AND RADIATION PATTERN MEASUREMENT

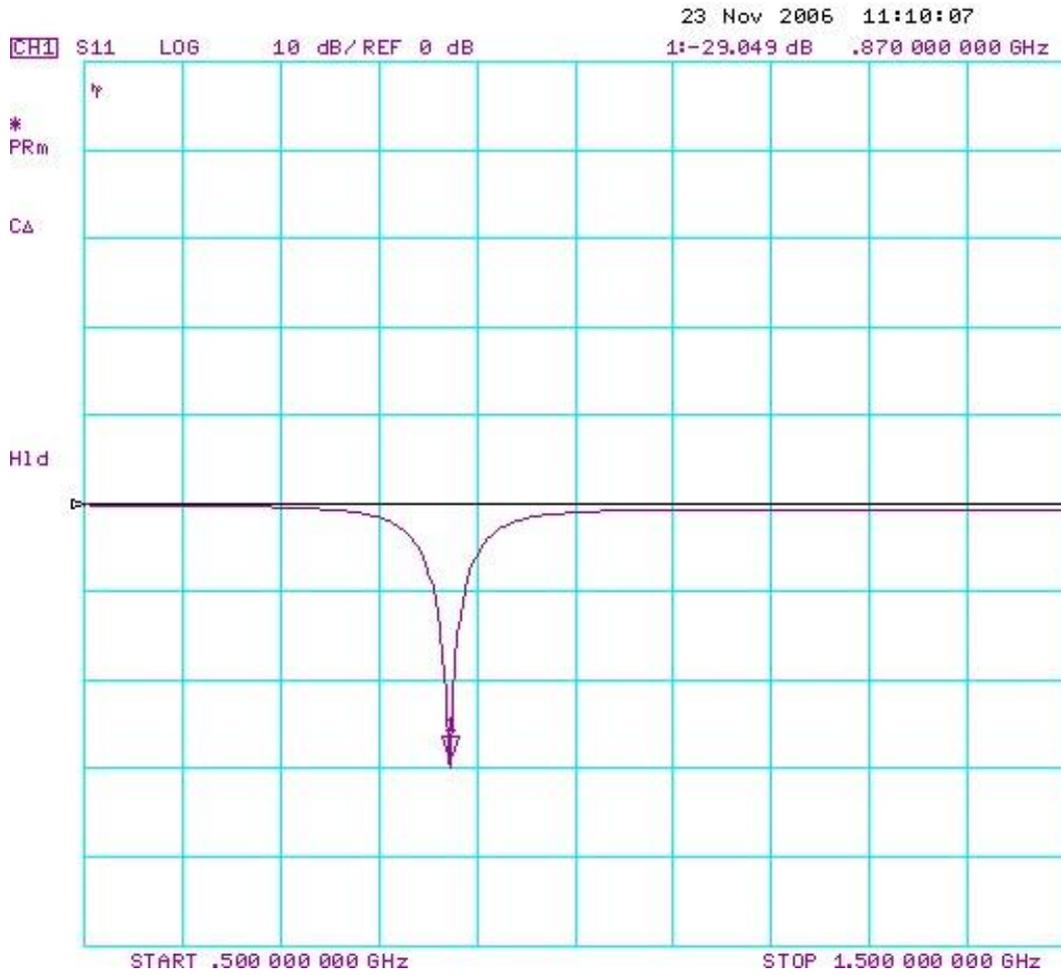


FR-4 PCB thickness = 0.8 mm

The length of transmission line = 60 mm (depends on PCB thickness)

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5. S₁₁ RETURN LOSS



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RELIABILITY DATA (Reference to IEC Specification)

IEC 384-10/ CECC 32 100 CLAUSE	IEC 6006868-2 TEST METHOD	TEST	PROCEDURE	REQUIREMENTS
4.4		Mounting	The antenna can be mounted on printed-circuit boards or ceramic substrates by applying wave soldering, reflow soldering (including vapour phase soldering) or conductive adhesive	No visible damage
4.5		Visual inspection and dimension check	Any applicable method using $\times 10$ magnification	In accordance with specification
4.6.1		Antenna	Central Frequency at 20°C	Standard test board in page 4
4.8		Adhesion	A force of 5 N applied for 10 s to the line joining the terminations and in a plane parallel to the substrate	No visible damage
4.9		Bond strength of plating on end face	Mounted in accordance with CECC 32 100, paragraph 4.4	No visible damage
			Conditions: bending 0.25 mm at a rate of 1mm/s, radius jig. 340 mm, 1 mm warp on FR4 board of 90 mm length	No visible damage
4.10	Tb	Resistance to soldering heat	260 \pm 5 °C for 10 \pm 0.5 s in a static solder bath	The terminations shall be well tinned after recovery.

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IEC 384-10/ CECC 32 100 CLAUSE	IEC 6006868-2 TEST METHOD	TEST	PROCEDURE	REQUIREMENTS
		Resistance to leaching	260 ± 5 °C for 30 ± 1 s in a static solder bath	Using visual enlargement of × 10, dissolution of the termination shall not exceed 10%
4.11	Ta	Solderability	Zero hour test, and test after storage (20 to 24 months) in original atmosphere; un-mounted chips completely immersed for 2 ± 0.5 s in 235 ± 5°C.	The termination must be well tinned, at least 75% is well tinned at termination

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ORDERING INFORMATION:

The antenna may be ordered by using the ordering code. These code numbers can be determined by the following rules:

CAN43 11 1 29 07 087 1K
 F C M S T A P

F. Family Code

CAN43 = Antenna

C. Packing Type Code

11 = Tape

M. Materials Code

1 = High Frequency Material

S. Size Code

29 = 12* 4 * 1.5 mm

T. Type

07 = central frequency 920MHz

08 = central frequency 870MHz

09 = central frequency 800MHz

A. Working Frequency

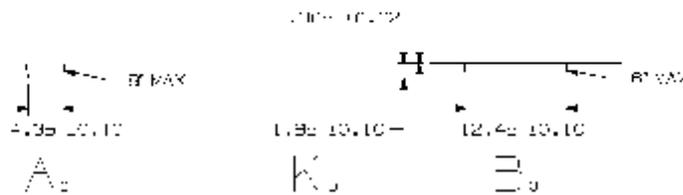
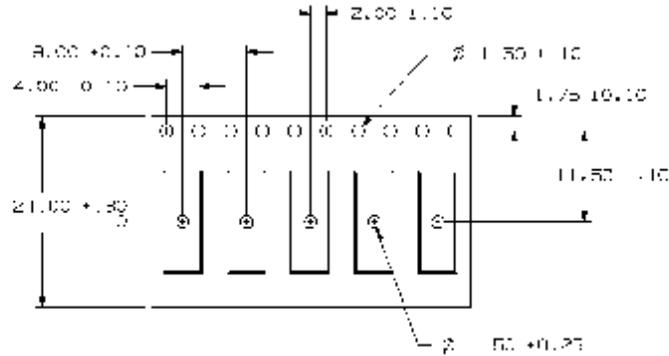
087 = 800~900MHz

P. Packing

1K = Tape packing, 1000pcs/reel

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Taping Blister Tape

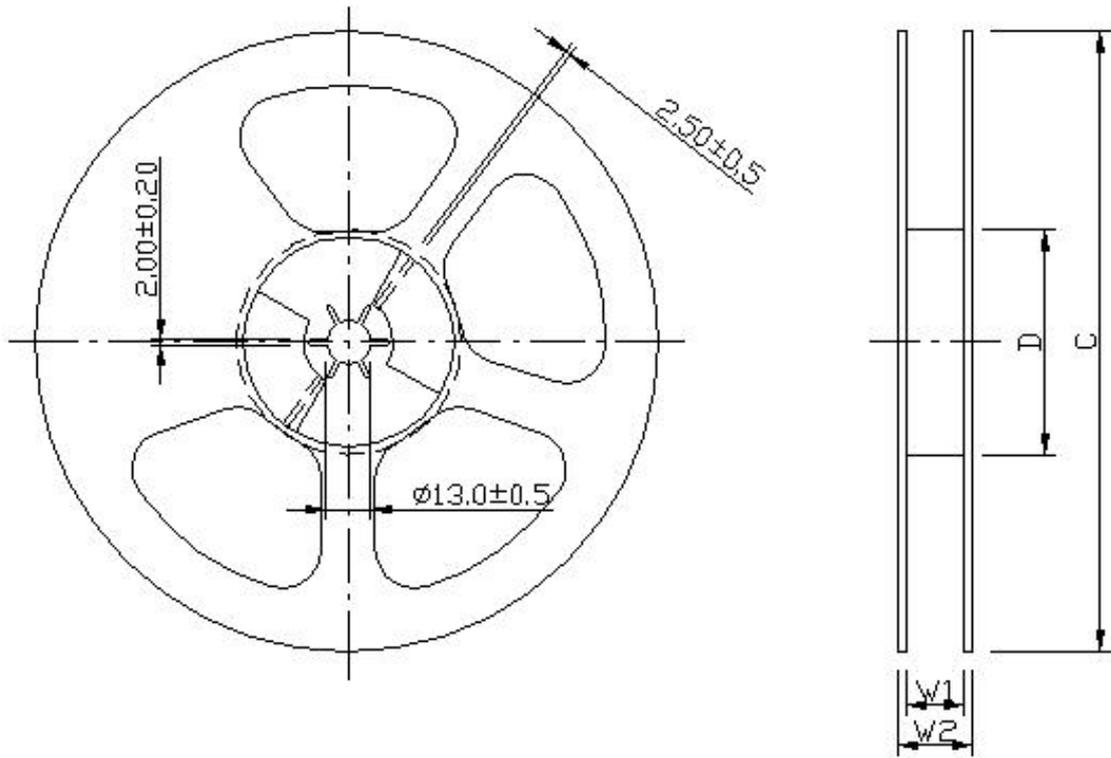


Dimension

Serial no	Checking note	Index	Spec(mm)
1	Sprocket hole	Do	1.5±0.10
2	Pocket hole	D1	1.50±0.25
3	Distance sprocket hole/sprocket hole	Po	4.0±0.10
4	Distance pocket/pocket	P1	8.0±0.10
5	Distance sprocket hole/pocket	P2	2.0±0.10
6	Tape width	W	24.0±0.30
7	Distance sprocket hole/outside	E	1.75±0.10
8	Distance sprocket hole/pocket	F	11.50±0.10
9	Pocket length	Ao	4.35±0.10
10	Pocket length	Bo	12.45±0.10
11	Pocket depth	Ko	1.85 ± 0.10
12	Thickness of tape	T	0.3±0.10
13	10x sprocket hole pitch	10Po	40.0±0.20

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Reel Specifications



Product size code	Units per Reel	Tape Width (mm)	C (mm)	D (mm)	W ₁ (mm)	W ₂ (mm)
Antenna	1000	24	180.0±1.0	62±0.5	16±0.5	20.5±0.5

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Revision Control:

Revision	Date	Content	Remark
1	Nov. 2006	New Issued	

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