ANTENNA PRODUCTS

DATA SHEET

433MHz Ceramic Chip Antenna

Sep, 2005, V3

	Print date 05/09/07							
	Multilayer Ceramic Antenna for 433 MHz (small size)		**CAN4313 129 200431B**				15th, Aug, 05	
							30th, Aug,05	
							7th, Sep,05	
Dennis Liu	C.T.Lee	7th,Sep, 05		Page 1	sheet 190-1			A4
spec.doc								

MULTILAYER CERAMIC ANTENNA (LINEAR POLARIZATION MODE) FOR 400MHz~500MHz

Product Specification[1]

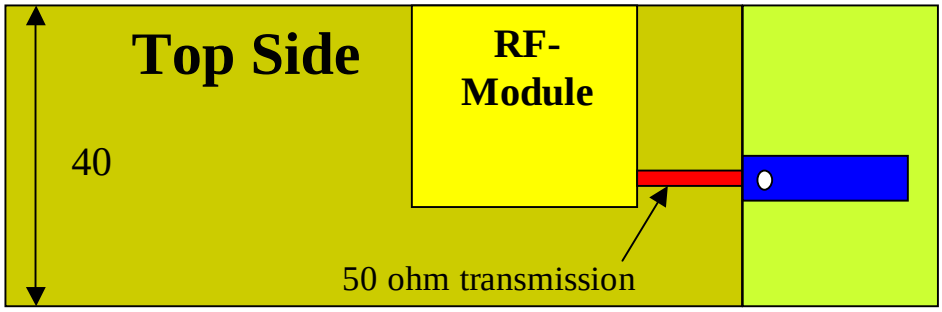
QUICK REFERENCE DATA

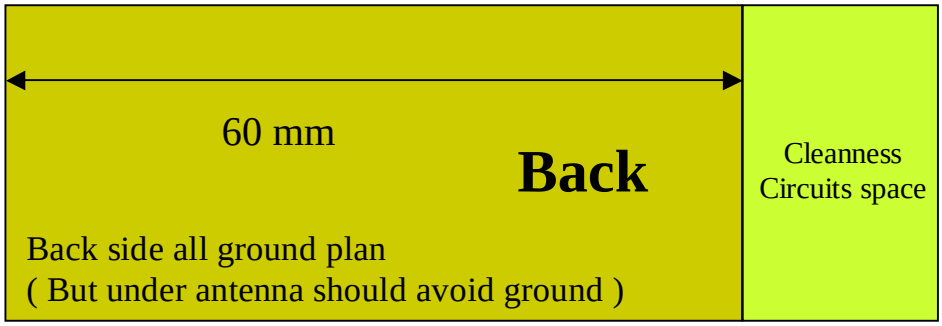
Working Frequency*	400~500MHz
Bandwidth	20 MHz (Min)
Gain	0.5 dBi (Max)
VSWR	3.0 max
Polarization	Linear
Azimuth	Omni-directional
Impedance	50Ω
Operating Temperature	-40~85 ^{o}C
Termination	Ni/Sn (Environmentally-Friendly Leadless)
Resistance to soldering heat	260^{o}C, 10 sec.

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

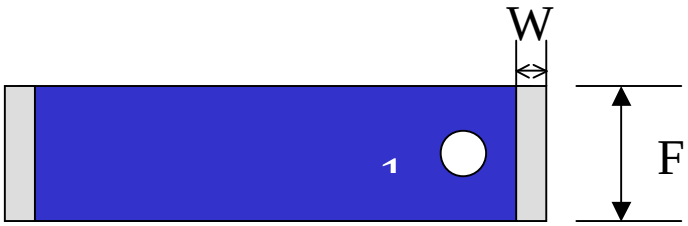
1. APPLICATION

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

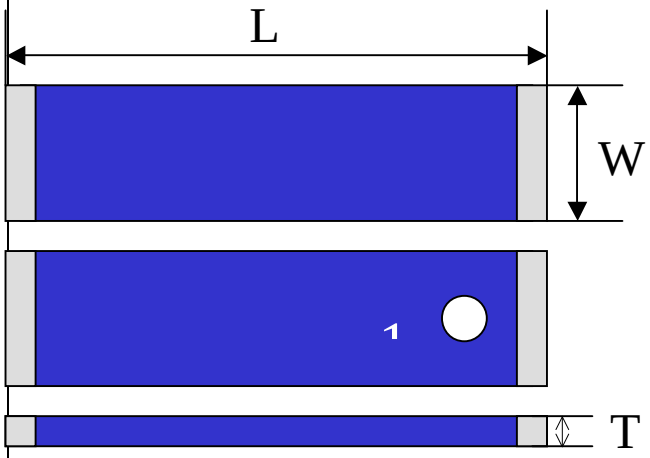




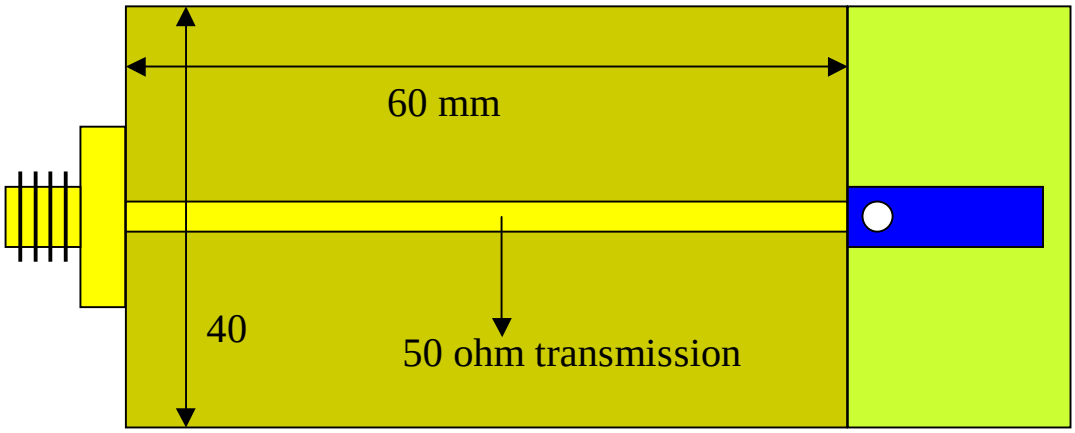
2. SOLDER LAND PATTERN FOR ANTENNA

Figure	Dimensions		*Remark*
	w	0.85 ± 0.3 mm	Feed Pad
	F	4.20 ± 0.3 mm	Feed Pad

3. MECHANICAL DATA

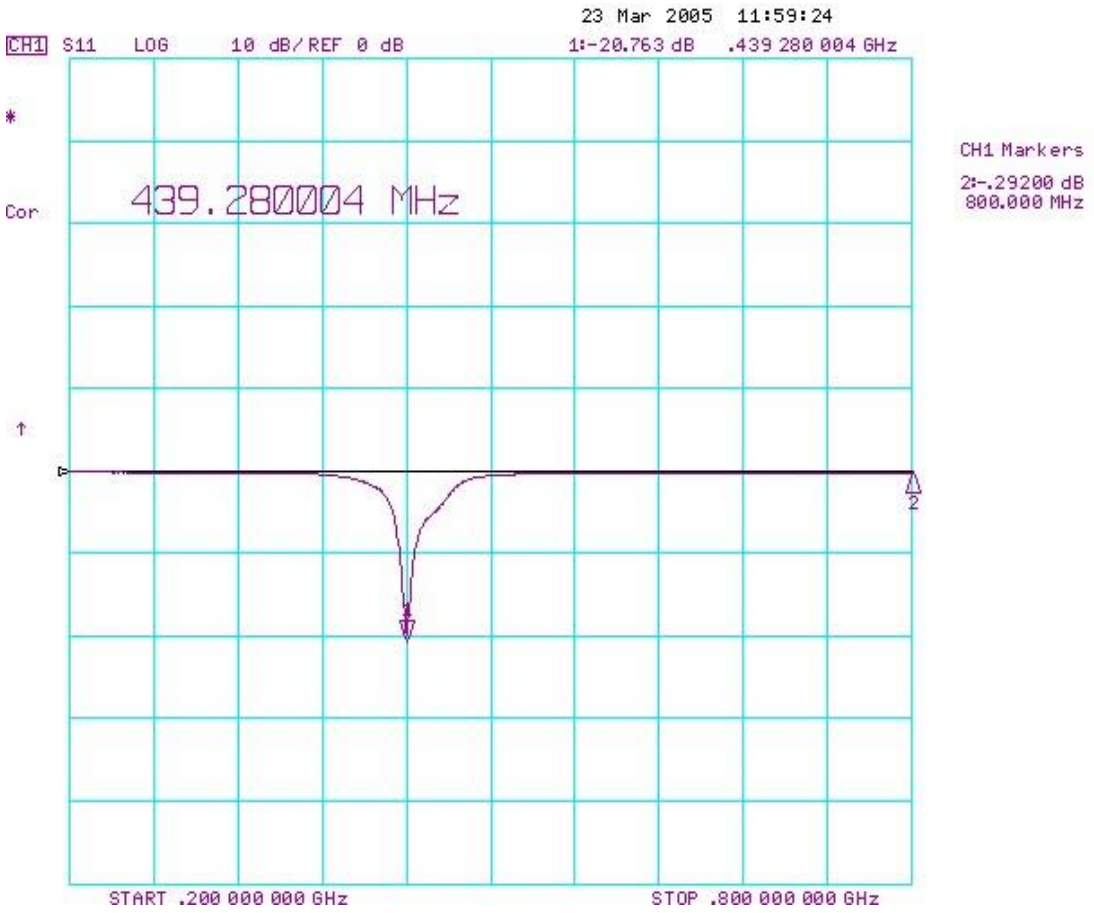
Figure	Dimension	Port
	W 4±0.5mm L 12±0.5mm T 1.5±0.3mm	Feed termination Solder termination

4. TEST BOARD DIMENSION FOR S11 (RETURN LOSS) AND RADIATION PATTERN MEASURNMENT



FR-4 PCB thickness = 0.8 mm
The length of transmission line = 60 mm (depends on PCB thickness)

5. S11 RETURN LOSS



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 ´ 10 magnification	In accordance with specification (no chip off 3 mm)
4.6.1		Antenna	Central Frequency at 20 ^{o}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

IEC 384-10/ CECC 32 100 CLAUSE	IEC 6006868-2 TEST METHOD	TEST	PROCEDURE	REQUIREMENTS
4.10	Tb	Resistance to soldering heat	260 ± 5 °C for 10 ± 0.5 s in a static solder bath	The terminations shall be well tinned after recovery and Central Freq. Change ± 6%
		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

ORDERING INFORMATION:

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

CAN43	13	1	29	20	043	1B
F	C	M	S	T	A	T

F. Family Code
CAN43 = Antenna

C. Packing Type Code
13 = Bulk

M. Materials Code
1 = High Frequency Material

S. Size Code
29 =12* 4 * 1.5 mm

T. Tolerance
20 = 20M Hz Band Width

A. Working Frequency
043 = 400~500MHz

CAN4311129200431B (Clear Text Code Example)							
CAN43	13	1	29	20	043	1	B
Product	Packing type	Material	Size	Type	Working Frequency	Quantities	Packing
CAN43= Antenna	Bulk	LTCC material	29=12*4mm	20= 20MHz	043=433MHz	1= 1K pcs	Bulking packing

Revision Control:

Revision	Date	Content	Remark
1	15th, Aug. 2005	New Issued	
2	30th, Aug. 2005	Modification of end-termination's appearance	
3	7th, Sep. 2005	Modification of 12nc and packing type	