MULTILAYER CERAMIC ANTENNA (LINEAR POLARIZATION MODE)

Product Specification[1] (Preliminary)

QUICK REFERENCE DATA

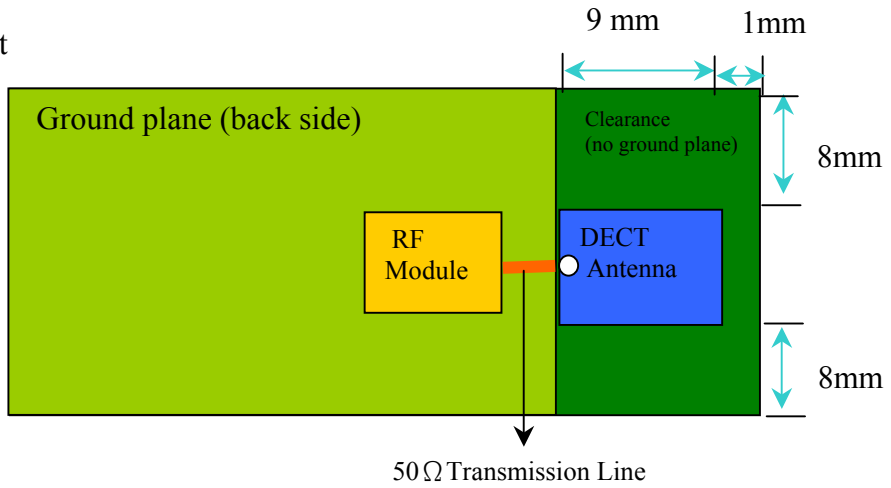
Dimension	8.8* 6.8 * 0.9 mm
Working Frequency	1.88~2.1 GHz
Gain	2 dBi Max
VSWR	2 max
Polarization	Linear
Azimuth	Omni-directional
Impedance	50Ω
Operating Temperature	-55~125 ^{O}C
Termination	Ni/Sn (Environmentally-Friendly Leadless)
Resistance to soldering heat	260^{O}C, 10 sec.

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

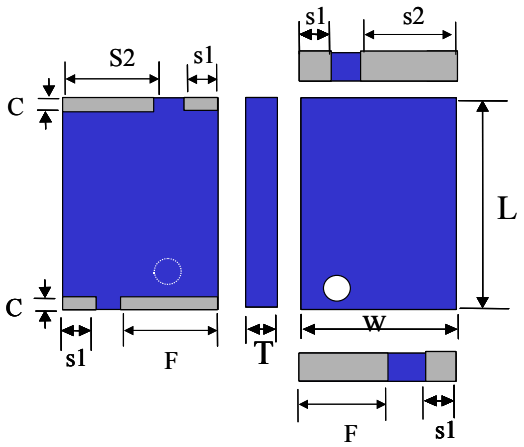
[1] All the technical data and information contained herein are subject to change without prior notice

APPLICATION

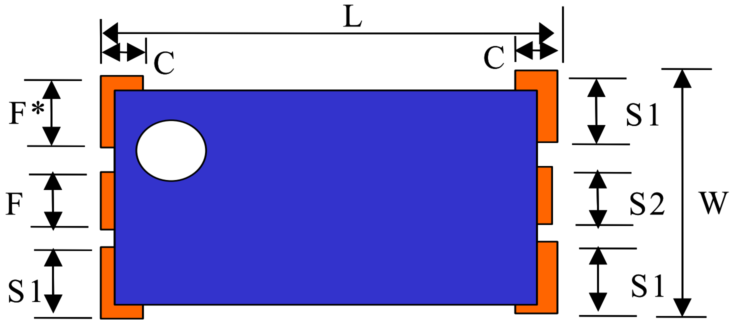
Suggested Layout



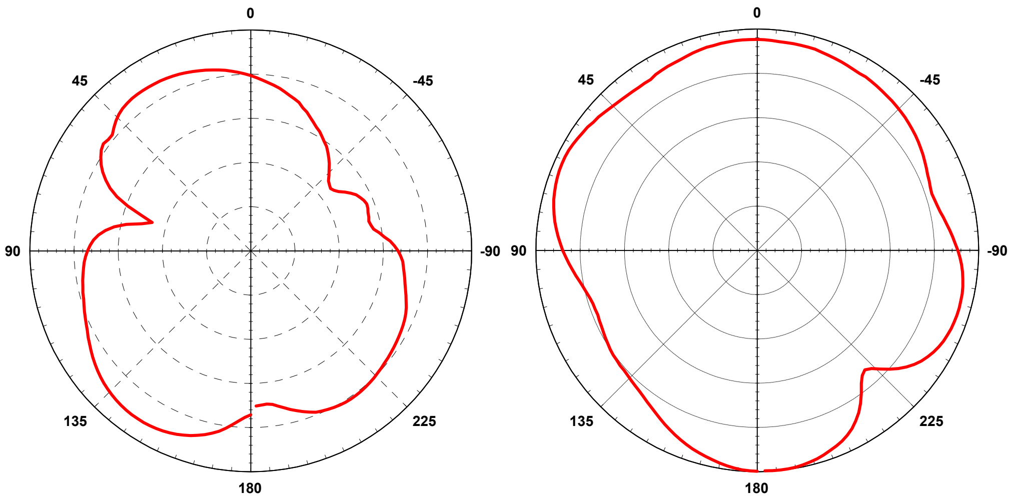
DIMENSIONAL DATA

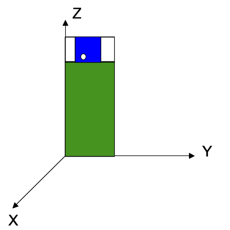
Figure	Dimension		Port
	L	8.8±0.2mm	-
	W	6.8±0.2mm	-
	T	0.9±0.2mm	-
	F	4.3±0.2mm	Feed termination
	C	0.5±0.3mm	-
	S1	1.3±0.2mm	Solder termination
	S2	4.3±0.2mm	Solder termination

SOLDER LAND PATTERN

Figure	**Dimensions (mm)**		*Remark*
	L	10.00 ± 0.10	
	W	7.00 ± 0.10	
	F	1.40 ± 0.10	Feed Pad
	F*	1.40 ± 0.10	Feed Pad (Optional)
	C	0.90 ± 0.10	
	S1	1.40 ± 0.10	NC Mount Pad Only
	S2	1.40 ± 0.10	NC Mount Pad Only

Radiation Pattern





E Plane (ZY Plane) & H Plane (XY Plane)

R&D	Print date 04/10/06		Preliminary use only		
	Multilayer Ceramic Antenna for 1.88GHz~2.1GHz		CAN4311 112 001881K		Nov. 20, 01 Dec. 13, 01 Jan. 7, 02
Cliff Wang, Ph.D.		2002-01-07	Page 3	sheet 190-3	A4
spec.doc	Phycomp Taiwan Ltd.				

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)
4.8		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 0.5 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 ± 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%

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
4.12	Na	Rapid change of temperature	-55 °C (30 minutes) to +125 °C (30 minutes); 100 cycles	No visible damage Central Freq. Change ± 6%
4.14	Ca	Damp heat	500 ± 12 hours at 60 °C; 90 to 95 % RH	No visible damage 2 hours recovery Central Freq. Change ± 6%
4.15		Endurance	500 ± 12 hours at 125 °C;	No visible damage 2 hours recovery Central Freq. Change ± 6%

ORDERING INFORMATION: 12NC Ordering Code

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

CAN 43 11 1 12 00 188 1K

CAN = Yageo Part No. for Antenna

F. Family Code
43 = Antenna
C. Packing Type Code
11 = 180 mm/ 7" blister (1000pcs)
M. Materials Code
1 = High Frequency Material

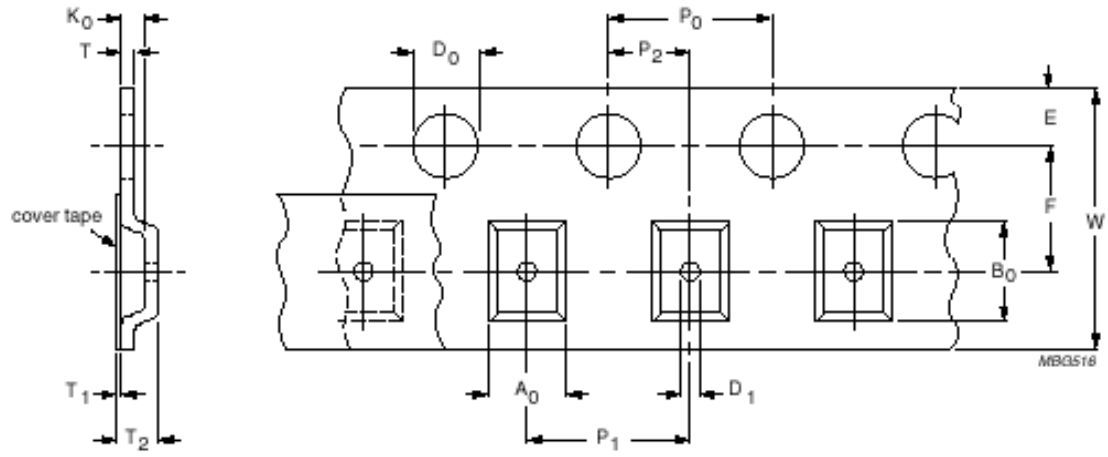
S. Size Code
12 = 8.8*6.8 * 0.9 mm

T. Tolerance
00 = 100 M Hz Band Width

A. Working Frequency
188 = 1.88 GHz~2.1GHz

Packing Type Code
1K = 1000 pcs for tape

Blister Tape Specifications

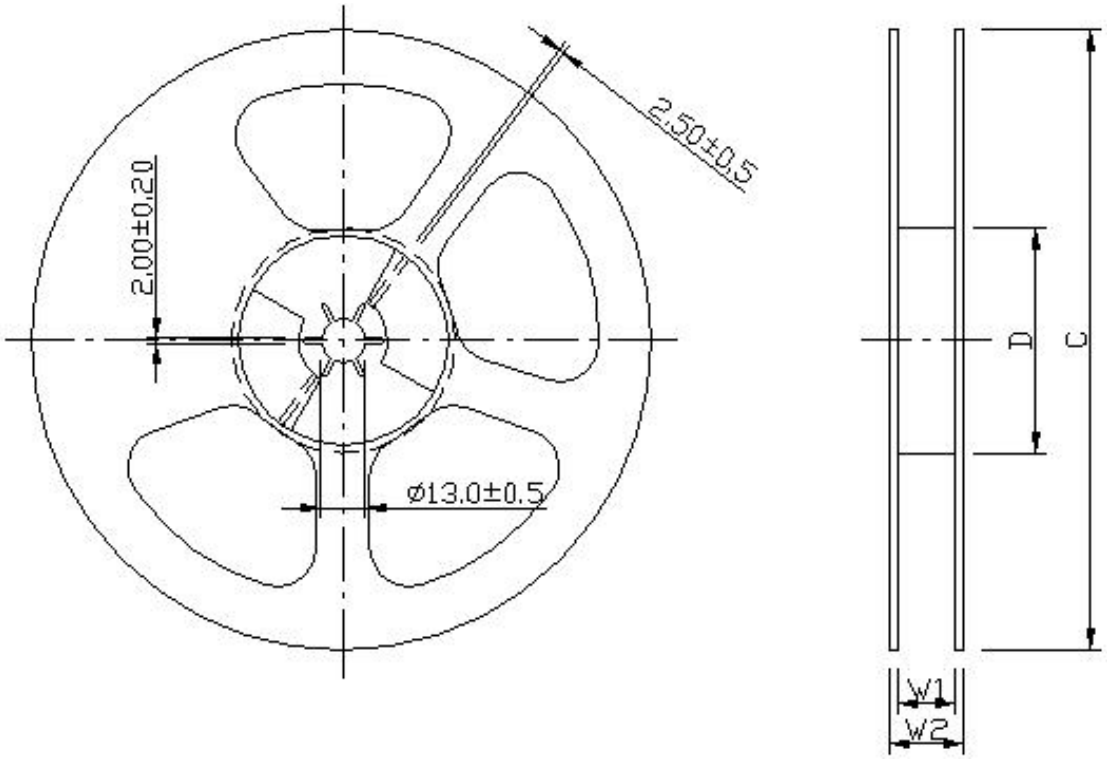


Cumulative pitch error: 0.2 mm over 10 pitches.
Cumulative tolerance over 10 holes: ±0.2 mm.
K_0: chosen so that the orientation of the component cannot change.
For dimensions see Table 4.

DIMENSION:

Serial no	Cecking note	Index	Spec(mm)
1	Sprocket hole	Do	1.55±0.10
2	Pocket hole	D1	1.50±0.10
3	Distance sprocket hole/sprocket hole	Po	4.0±0.10
4	Distance pocket/pocket	P1	12.0±0.10
5	Distance sprocket hole/pocket	P2	2.0±0.10
6	Tape width	W	16.0±0.30
7	Distance sprocket hole/outside	E	1.75±0.10
8	Distance sprocket hole/pocket	F	7.50±0.10
9	Pocket length	Ao	7.45±0.10
10	Pocket length	Bo	9.30±0.10
11	Pocket depth	Ko	1.35±0.10
12	Thickness of tape	T	0.25±0.10

7”(180mm) Reel Specifications



Product size code	Units per Reel	Tape Width (mm)	C (mm)	D (mm)	W_1 (mm)	W_2 (mm)
Antenna	1000	16	180.0±1.0	62±0.5	16.0^{+1}_{-0}	20.5±0.2