

GPS ANTENNA PRODUCTS

DATA SHEET

Bulk Ceramic SMD GPS Antenna (18*18)

26th, April.2005 Rev.4

Bulk Ceramic SMD GPS ANTENNA (18*18)				CAN4313 424 06 1581B				— ▶	1	Oct. 7, 04	
								— ▶	2	Oct .26,04	
								— ▶	3	4 th , Jan, 05	
BY / 製定者	Roger Chang	SUPER / 原圖編號	J.S. Hsieh	TLL.SH / 共頁	10	PAGE/ 頁		SH nr. 190	— ▶	4	26th,April, 05
CHECK	C.T.Lee			DATE / 日期		26th,April, 05			— ▶	5	

**CERAMIC ANTENNA (CIRCULAR POLARIZATION SMD TYPE)
FOR GLOBAL POSITIONING SYSTEMS (GPS) (1.575G Hz)**

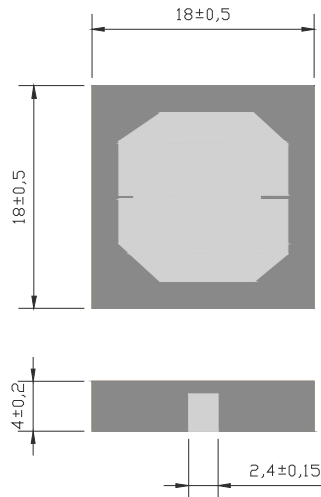
Product Specification¹

QUICK REFERENCE DATA

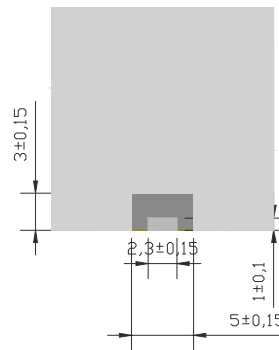
Central Frequency	1.575 GHz
Bandwidth	10 MHz
Gain	1 dBi Max
VSWR	2.0 max
Polarization	Right Hand Circular Polarization
Axis Ratio	3dB
Impedance	50Ω
Operating Temperature	-25~+85 °C

MECHANICAL DATA (18 * 18 * 4 mm)

Bulk Antenna Dimension



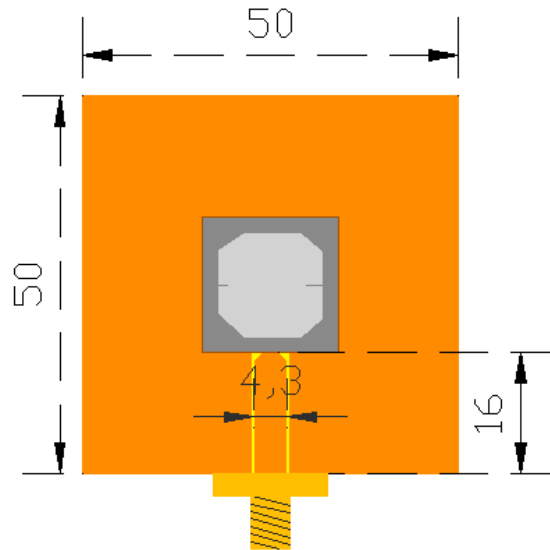
Soldering Pad Dimension



Bulk Ceramic SMD GPS ANTENNA (18*18)				CAN4313 424 06 1581B				— ▶	1	Oct. 7, 04	
								— ▶	2	Oct .26,04	
								— ▶	3	4 th , Jan, 05	
BY / 製 定 者	Roger Chang	SUPER / 原 圖 編 號	J.S. Hsieh	TLL.SH / 共 頁	10	PAGE/ 頁		SH nr. 190	— ▶	4	26th,April, 05
CHECK	C.T.Lee			DATE / 日 期		26th,April, 05			— ▶	5	

RECOMMENDED TEST BOARD

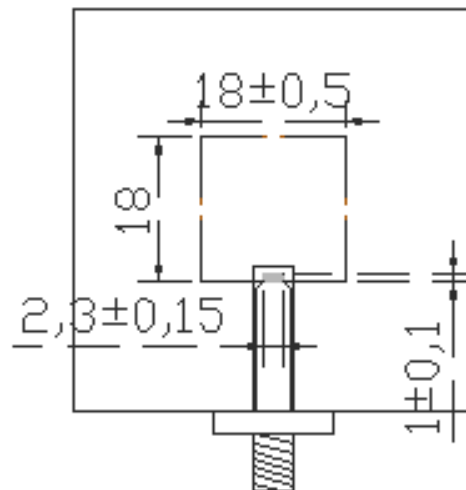
Dimension of test board: 50 * 50 mm square ground plane with 16mm-length 50Ω CPW-G feed line



Unit : mm

(Input: 50Ω CPW-G feed line)

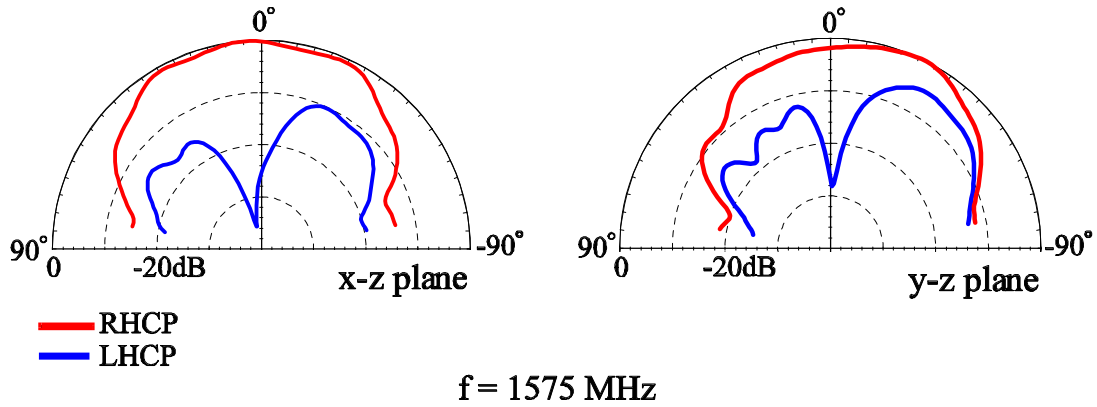
LAYOUT OF PCB SOLDERING PAD



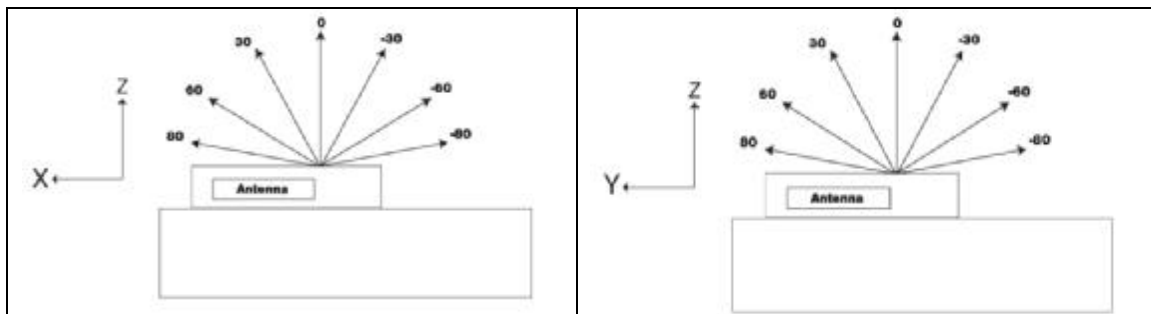
Unit : mm

Bulk Ceramic SMD GPS ANTENNA (18*18)				CAN4313 424 06 1581B				— ▶	1	Oct. 7, 04	
								— ▶	2	Oct .26,04	
								— ▶	3	4 th , Jan, 05	
BY / 製 定 者	Roger Chang	SUPER / 原 圖 編 號	J.S. Hsieh	TLL.SH / 共 頁	10	PAGE/ 頁		SH nr. 190	— ▶	4	26th,April, 05
CHECK	C.T.Lee			DATE / 日 期		26th,April, 05			— ▶	5	

DIVERSITY CHARACTERISTICS

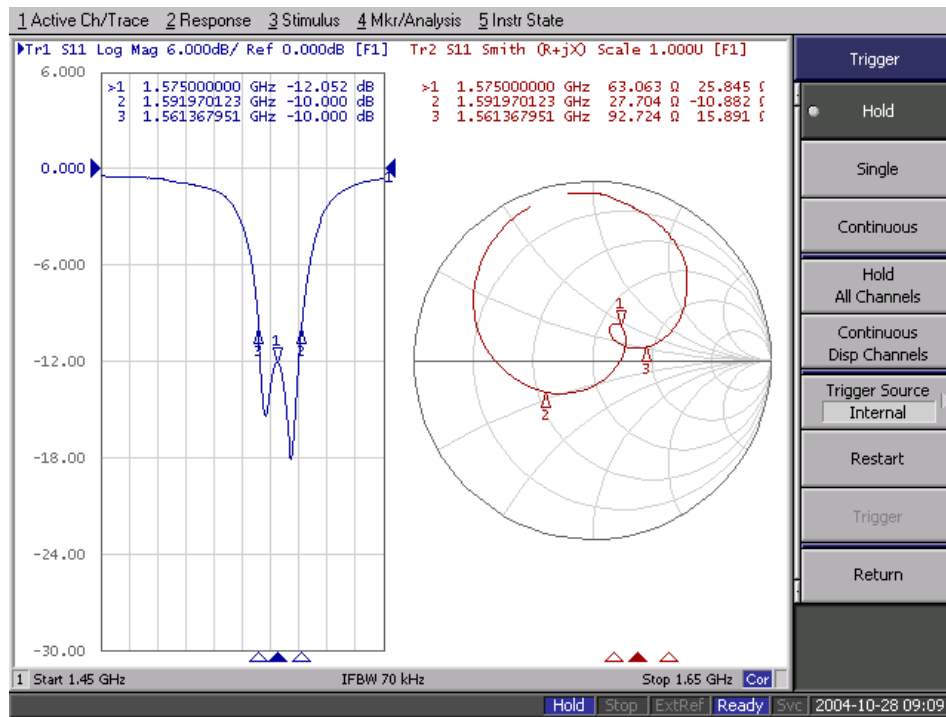


DIRECTIVITY CHART



Bulk Ceramic SMD GPS ANTENNA (18*18)				CAN4313 424 06 1581B				— ▶	1	Oct. 7, 04	
								— ▶	2	Oct .26,04	
								— ▶	3	4 th , Jan, 05	
BY / 製定者	Roger Chang	SUPER / 原圖編號	J.S. Hsieh	TLL.SH / 共頁	10	PAGE/ 頁		SH nr. 190	— ▶	4	26th,April, 05
CHECK	C.T.Lee			DATE / 日期		26th,April, 05			— ▶	5	

RETURN LOSS AND SWITCH CHART (with 50 * 50 mm square Ground Plane)



Bulk Ceramic SMD GPS ANTENNA (18*18)				CAN4313 424 06 1581B				— ▶	1	Oct. 7, 04	
								— ▶	2	Oct .26,04	
								— ▶	3	4 th , Jan, 05	
BY / 製 定 者	Roger Chang	SUPER / 原 圖 編 號	J.S. Hsieh	TLL.SH / 共 頁	10	PAGE/ 頁		SH nr. 190	— ▶	4	26th,April, 05
CHECK	C.T.Lee			DATE / 日 期		26th,April, 05			— ▶	5	

IEC 384-10/ CECC 32 100 CLAUSE	IEC 60068-2 TEST METHO D	TEST	PROCEDURE	REQUIREMENTS							
4.4		Mounting	The antenna can be mounted on printed-circuit boards or ceramic substrates by applying reflow soldering	No visible damage							
4.5		Visual inspection and dimension check	Any applicable method using ´ 10 magnification	In accordance with specification (chip off 4mm)							
4.6.1		Antenna	Central Frequency at 20 °C	Standard test board in page 3							
4.8		Adhesion	A force of 3 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, 2mm warp on FR4 board of 90 mm length	No visible damage							
4.11	20(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							
Bulk Ceramic SMD GPS ANTENNA (18*18)			CAN4313 424 06 1581B		— ▶	1	Oct. 7, 04				
					— ▶	2	Oct .26,04				
					— ▶	3	4 th , Jan, 05				
BY / 製 定 者	Roger Chang	SUPER / 原 圖 編 號	J.S. Hsieh	TLL.SH / 共 頁	10	PAGE/ 頁		SH nr. 190	— ▶	4	26th,April, 05
CHECK	C.T.Lee			DATE / 日 期		26th,April, 05			— ▶	5	

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 13 4 24 06 158 1B
F C M S T A P

CAN = Yageo Part No. for Antenna

F. Family Code

43 = Antenna

C. Packing Type Code

13 = bulk packaging, 1000 pcs

M. Materials Code

4 = High Frequency Material

S. Size Code

24 = 18 * 18 * 4 mm

T. Tolerance

06 = SMD Type

A. Working Frequency

158 = 1.575 GHz

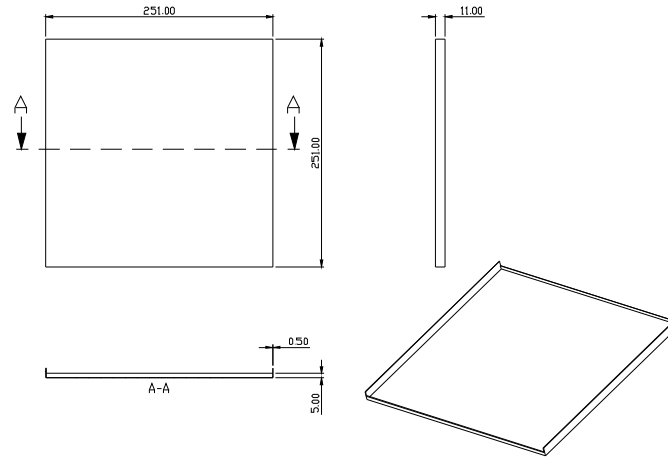
P. Packing Type Code

1B = bulk packaging, 1000 pcs

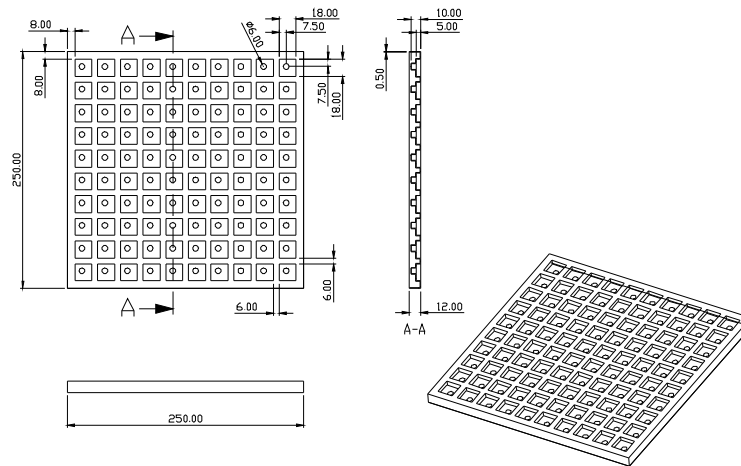
CAN4313424061581B (Clear Text Code Example)							
CAN43	13	4	24	06	158	1	B
Product	Packing type	Material	Size	Type	Central Frequency	Quantities	Packing
CAN43= Antenna	Bulk	HTCC material	24=18*18 mm	SMD	157= 1.575GHz	1= 1K pcs	B=Bulk packing

Bulk Ceramic SMD GPS ANTENNA (18*18)				CAN4313 424 06 1581B					— ▶	1	Oct. 7, 04
									— ▶	2	Oct .26,04
									— ▶	3	4 th , Jan, 05
BY / 製 定 者	Roger Chang	SUPER / 原 圖 編 號	J.S. Hsieh	TLL.SH / 共 頁	10	PAGE/ 頁		SH nr. 190	— ▶	4	26th,April, 05
CHECK	C.T.Lee			DATE / 日 期		26th,April, 05			— ▶	5	

PACKING INFORMATION



Cover Tray



Bottom Tray

Bulk Ceramic SMD GPS ANTENNA (18*18)				CAN4313 424 06 1581B				— ▶	1	Oct. 7, 04	
								— ▶	2	Oct .26,04	
								— ▶	3	4 th , Jan, 05	
BY / 製 定 者	Roger Chang	SUPER / 原 圖 編 號	J.S. Hsieh	TLL.SH / 共 頁	10	PAGE/ 頁		SH nr. 190	— ▶	4	26th,April, 05
CHECK	C.T.Lee			DATE / 日 期		26th,April, 05			— ▶	5	

REVISION CONTROL:

Revision	Date	Content	Remark
1	Oct. 7, 2004		
2	Oct.26,2004		
3	4th.Jan,2005	Modify the soldering pad and format	
4	26th.April,2005	Modify the reliability data	

Bulk Ceramic SMD GPS ANTENNA (18*18)				CAN4313 424 06 1581B				— ▶	1	Oct. 7, 04	
								— ▶	2	Oct .26,04	
								— ▶	3	4 th , Jan, 05	
BY / 製 定 者	Roger Chang	SUPER / 原 圖 編 號	J.S. Hsieh	TLL.SH / 共 頁	10	PAGE/ 頁		SH nr. 190	— ▶	4	26th,April, 05
CHECK	C.T.Lee			DATE / 日 期		26th,April, 05			— ▶	5	