DATA SHEET

0.9/1.8/1.9GHz Triple Band Antenna with Cable & Connector for Mobile Application

Preliminary product specification
Supersedes data of 10th Aug., 2004

2005 Jun. 7 Rev. 10

0.9/1.8/1.9GHz Triple Band Antenna with Cable & Connector for Mobile Application				CAN 4313 330 009191B CAN 4313 330 019191B CAN4313 330 029191B CAN4313 330 039191B CAN4313 330 049191B CAN4313 330 059191B CAN4313 330 069191B CAN 4313 330 079191B CAN4313 330 089191B CAN4313 330 099191B CAN4313 330 109191B CAN4313 330 119191B CAN4313 330 129191B					— ▶	6	Mar. 26, 03
									— ▶	7	Aug. 9, 04
									— ▶	8	Aug. 10, 04
BY	Cliff	SUPER		TLL.SH	8	PAGE	1	SH nr.	— ▶	9	Jun. 7, 05
CHECK				DATE		July 15, 2005			— ▶	10	July 15, 05

Phicomp

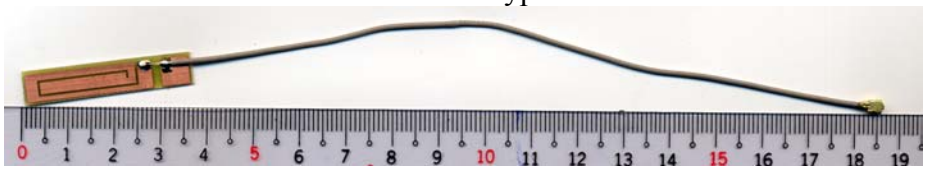
GSM/DCS/PCS (900/1800/1900MHz) Antenna with Connector/Cable

Product Specification[1]

QUICK REFERENCE DATA

Frequency Range	GSM900	880-960 MHz
	DCS1800	1710-1880 MHz
	PCS1900	1850-1990 MHz
Peak Gain	GSM900	0~0.5 dBi
	DCS1800/PCS1900	0.5~1 dBi
(Dependent on ground plane size and tuning circuit of customer)		
VSWR		3.5 max
(Dependent on ground plane size and after tuning of customer)		
Polarization		Linear
Impedance		50 Ohm
Operating Temperature		-40~85 ^{O}C
Size		35X6X0.4 mm
Maximum Power		1W
Antenna Flammability Grade		Antenna Patch: UL94V0; Antenna Cable: E56198

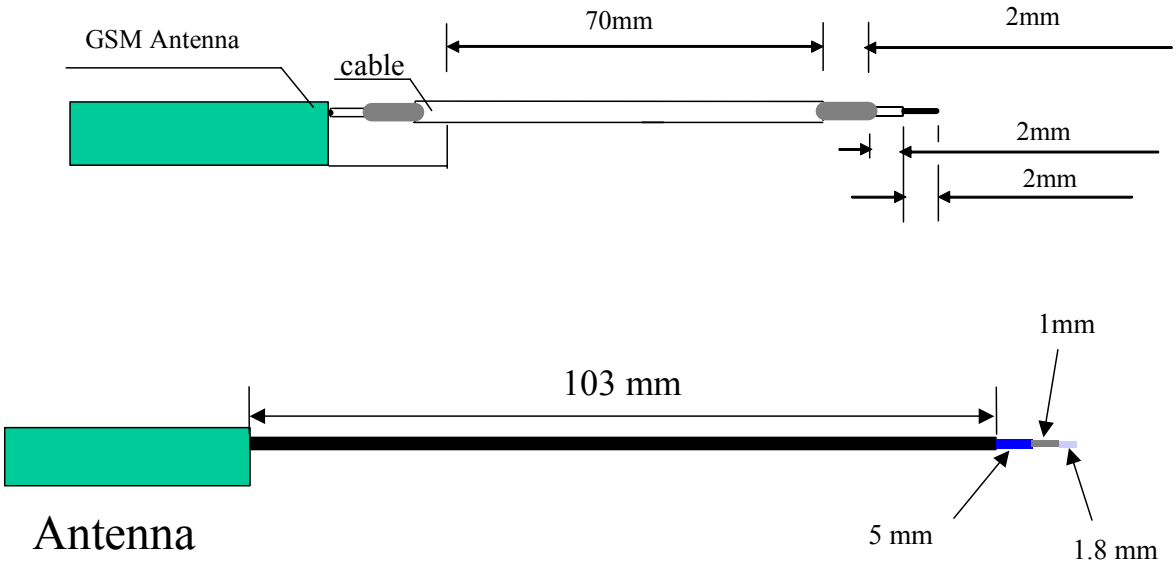
MMCX Type



Mini Coaxial/ Mini Connector Type

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

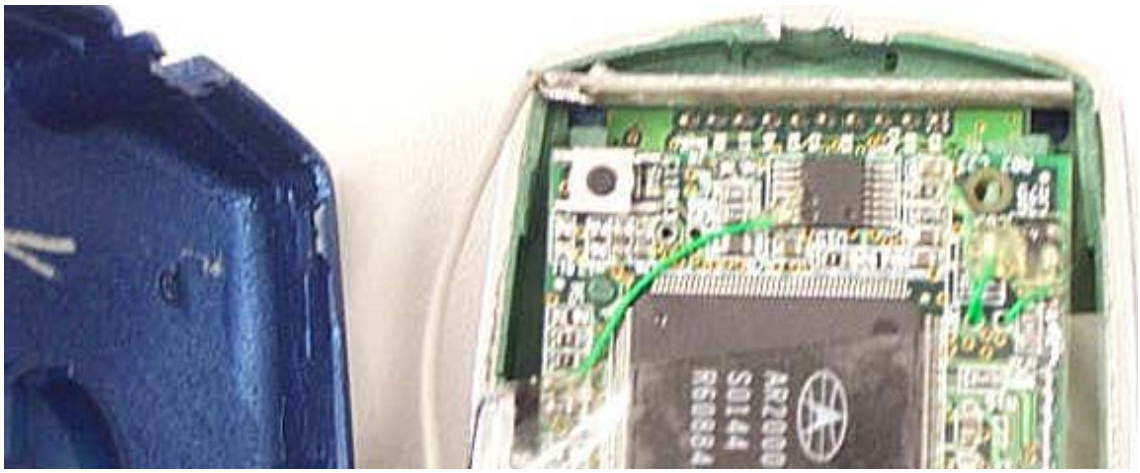
DIMENSIONAL DATA and Connector/Cable Information (unit: mm).



Example: CAN4313 330 11919 1B

Tolerance of radiation patch length and width is +-1 mm and thickness is +-0.1 mm
Cable length tolerance is +- 1 mm

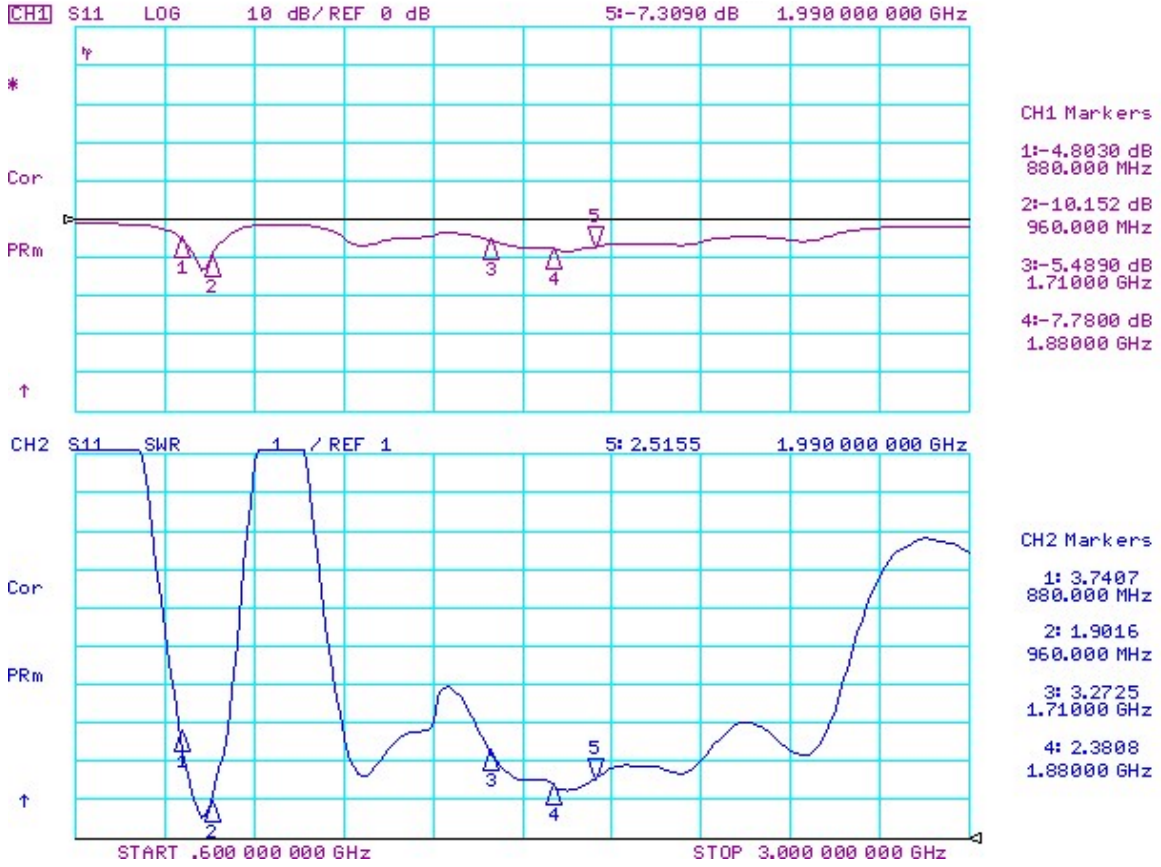
APPLICATION IN MOBILE: Place antenna in non-metal positions for best radiation



Example of Application, Antenna should be far from ground plane or metal shielding

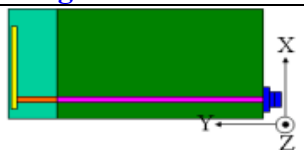
0.9/1.8/1.9GHz Triple Band Antenna with Cable & Connector for Mobile Application				**CAN 4313 330 009191B CAN 4313 330 019191B CAN4313 330 029191B CAN4313 330 039191B CAN4313 330 049191B CAN4313 330 059191B CAN4313 330 069191B CAN 4313 330 079191B CAN4313 330 089191B CAN4313 330 099191B CAN4313 330 109191B CAN4313 330 119191B CAN4313 330 129191B**					— ▶	6	Mar. 26, 03
									— ▶	7	Aug. 9, 04
									— ▶	8	Aug. 10, 04
BY	**Cliff**	**SUPER**		**TLL.SH**	8	**PAGE**	3	SH nr.	— ▶	9	Jun. 7, 05
CHECK				**DATE**		July 15, 2005			— ▶	10	July 15, 05

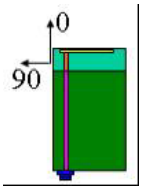
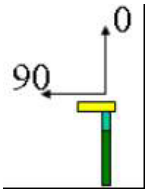
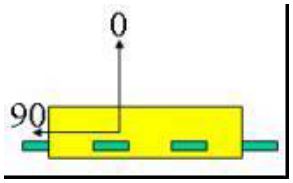
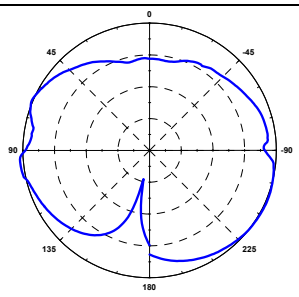
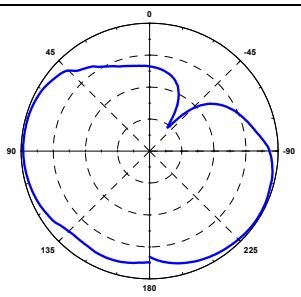
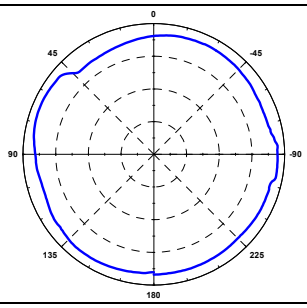
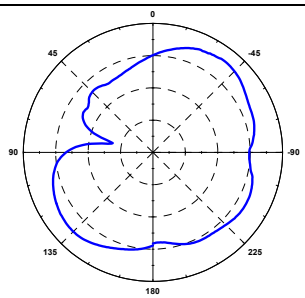
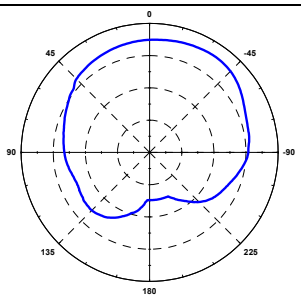
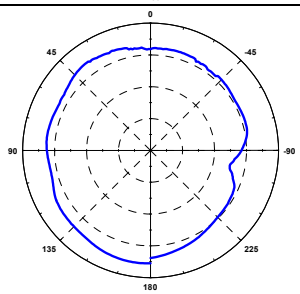
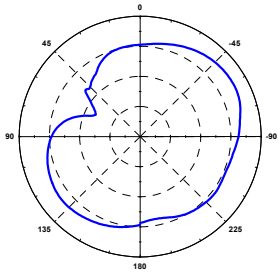
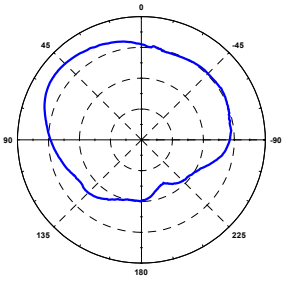
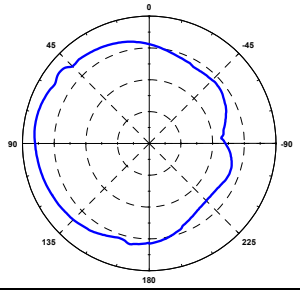
Return Loss Measurement in Mobile Unit (Note: Depending on antenna environment)



0.9/1.8/1.9GHz Triple Band Antenna with Cable & Connector for Mobile Application				**CAN 4313 330 009191B CAN 4313 330 019191B CAN4313 330 029191B CAN4313 330 039191B CAN4313 330 049191B CAN4313 330 059191B CAN4313 330 069191B CAN 4313 330 079191B CAN4313 330 089191B CAN4313 330 099191B CAN4313 330 109191B CAN4313 330 119191B CAN4313 330 129191B**					6	Mar. 26, 03
									7	Aug. 9, 04
									8	Aug. 10, 04
BY	**Cliff**	**SUPER**		**TLL.SH**	8	**PAGE**	4	SH nr.	9	Jun. 7, 05
CHECK				**DATE**		July 15, 2005			10	July 15, 05

Radiation Pattern Polar Plot (Note: Depending on antenna environment)



Plane	XY Plane	YZ Plane	XZ Plane
			
900MHz			
1800MHz			
1950MHz			

0.9/1.8/1.9GHz Triple Band Antenna with Cable & Connector for Mobile Application				CAN 4313 330 009191B CAN 4313 330 019191B CAN4313 330 029191B CAN4313 330 039191B CAN4313 330 049191B CAN4313 330 059191B CAN4313 330 069191B CAN 4313 330 079191B CAN4313 330 089191B CAN4313 330 099191B CAN4313 330 109191B CAN4313 330 119191B CAN4313 330 129191B					— ▶	6	Mar. 26, 03
										— ▶	7	Aug. 9, 04
										— ▶	8	Aug. 10, 04
BY	Cliff	SUPER		TLL.SH	8	PAGE	5	SH nr.		— ▶	9	Jun. 7, 05
CHECK				DATE		July 15, 2005				— ▶	10	July 15, 05

RELIABILITY DATA (Reference to IEC Specification)

IEC 384-10/ CECC 32 100 CLAUSE	IEC 60068-2 TEST METHOD	TEST	PROCEDURE	REQUIREMENTS
4.5		Visual inspection and dimension check	Any applicable method using × 3 magnification	In accordance with specification (pcb damage 2 mm)
4.6.1		Antenna	Frequency = 0.9/1.8/1.9 GHz; Triple Band	Standard test board
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
4.12	4(Na)	Rapid change of temperature	-40 °C (30 minutes) to +80 °C (30 minutes); 5 cycles	No visible damage Central Freq. Change ± 6%
4.14	3(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 80 °C;	No visible damage 2 hours recovery Central Freq. Change ± 6%

ORDERING INFORMATION:

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

CAN4313 3 30 11 919 1B
F C M S T A C

F. Family Code
CAN43 = Antenna

C. Packing Type Code
13 = per 1000pcs

M. Materials Code
3 = FR-4 material (K=4)

S. Size Code of Antenna Patch
30 = 35 * 6 * 0.4 mm

T. Tolerance and Style
00 = GSM/DCS/PCS Band using 1.13 mm cable with Ipex connector, 15 cm
01 = GSM/DCS/PCS Band using RG178 cable with Right Angle MMCX connector, 20 cm (actual 20.8 cm)
02 = GSM/DCS/PCS Band using 1.13 mm cable without connector, 30 cm (actual 30.8 cm)
03 = GSM/DCS/PCS Band using 1.13 mm cable with MMC card, 5.3 cm (actual 6.3 cm)
04 = GSM/DCS/PCS Band using 1.13 mm cable with enlarged Ipex, 30 cm (actual 30.8 cm)
05 = GSM/DCS/PCS Band PCB only
06 = GSM/DCS/PCS Band using 1.13 mm cable with Ipex connector, 10 cm (actual 10.8 cm)
07 = GSM/DCS/PCS Band using 1.13 mm cable with MMCX connector, 130 cm (actual 130.8 cm)
08 = GSM/DCS/PCS Band using 1.13 mm cable with MMCX connector, 30 cm (actual 30.8 cm)
09 = GSM/DCS/PCS Band using 1.13 mm cable with Ipex/HRS connector, 3.8 cm (actual 3.8 cm)
10 = GSM/DCS/PCS Band using 1.13 mm cable without connector, 7 cm outer cable (actual around 8.5 cm)
11 = GSM/DCS/PCS Band using 1.13 mm cable without connector, 103 mm outer cable
12 = GSM/DCS/PCS Band using 1.13 mm cable with Ipex or Hirose connector, 7 cm outer cable (actual around 8.5 cm)

A. Working Frequency
919 = GSM 900 880-960 MHz, DCS 1800 1710-1880 MHz
PCS 1900 1850-1990 MHz

C. Packing Type Code
1B: 1000 pcs in bulk/bag

Revision Control:

Revision	Date	Content	Remark
1	Aug. 7, 2002	New Issued	
2	Oct. 17, 2002	Modify Hirose/Ipex or MMCX connector using 1.13 mm cable	
3	Jan. 30, 2003	Add Hirose/Ipex or MMCX connector using 1.13 mm cable, 30 cm CTC and 12NC	
4	Mar.10, 2003	Add MMC Card, 53 cm	
5	Mar.13, 2003	Add 30 cm cable and PCB only and 10cm coding	
6	Mar.17, 2003	Add 130 cm cable MMCX coding	
7	Mar.26, 2003	Add 30 cm cable MMCX coding	
8	Aug.9, 2004	Add 3.8 cm cable Hirose/Ipex connector	
9	Aug.10, 2004	Add 7 cm outer cable without connector	
10	Jun.7, 2005	Add 103 mm outer cable without connector	
11	July 15, 2005	Add 70 mm outer cable with Ipex/Hirose connector	