Antenna Report

Model Name :	SAPP100	Date:	1/05/2009
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Embedded GSM/WCDMA, WiFi / BT, GPS Antenna

1. Overview

The document is the specification of the embedded GSM/WCDMA, WiFi / BT, GPS antenna for phone applications.

1.1 Denotations

dBi: Decibel relative isotropic antenna
Tx: Transmit frequency
Rx: Receive frequency
GSM: Global Service for Mobile communication
WCDMA: Wideband Code Division Multiple Access
Peak Gain: The peak value of the antenna gain

1.2 Antenna Type

GSM/WCDMA：PIFA type
WiFi / BT：PIFA type
GPS：PIFA type

1.3 Antenna Brand

GSM/WCDMA：HTC
WiFi / BT：HTC
GPS：HTC

2 Gain measurements

2.1 GSM/WCDMA 3D Antenna Gain Measurement Result

Frequency (MHz)	824	894	1920	2170
Peak Gain (dBi)	-3	-2.2	-1.8	-2.1

2.2 WiFi / Bluetooth 3D Antenna Gain Measurement Result

Frequency (MHz)	2400	2450	2500
Peak Gain (dBi)	0.8	1.1	0.6

2.3 GPS 3D Antenna Gain Measurement Result

Frequency (MHz)	1575
Peak Gain (dBi)	-2.3

3 Active measurements

GSM/WCDMA EIRP and EIS Measurement Result

GSM 850	**Channel**	**128**	**189**	**251**
	EIRP (dBm)	29.4	29	29
	Cell Power(dBm)	-109.1	-109.7	-109.7
GSM 900	**Channel**	**975**	**42**	**124**
	EIRP (dBm)	32.3	33.4	32.3
	Cell Power(dBm)	-109.6	-110.3	-109.7
DCS	**Channel**	**512**	**698**	**885**
	EIRP (dBm)	32.3	33.7	32.5
	Cell Power(dBm)	-111.7	-111.1	-110.6
PCS	**Channel**	**512**	**661**	**810**
	EIRP (dBm)	31	30.2	30.2
	Cell Power(dBm)	-109.2	-109.6	-109.1
BC 1	**Channel**	**9612**	**9750**	**9888**
	EIRP (dBm)	24.4	25.6	25
	Channel	**10562**	**10700**	**10838**
	Cell Power(dBm)	-114.2	-114.2	-114
BC 8	**Channel**	**2712**	**2788**	**2863**
	EIRP (dBm)	23.2	24	24.2
	Channel	**2937**	**3013**	**3088**
	Cell Power(dBm)	-111	-112.3	-110.3

BT/WIFI EIRP and EIS Measurement Result

WLAN (11M)			
	CH1	**CH7**	**CH13**
EIRP (dBm)	21.2	22	21.6
Sensitivity(dBm)	-90	-89	-89
BT			
	CH0	**CH39**	**CH78**
EIRP (dBm)	1.8	2.8	1.6
Sensitivity (dBm)	-87	-88	-87

4. Antenna Materials

The antenna can not have the materials of plumbum (Pb), halogen and mercury (Hg).