Antenna Specification

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History

2003-09-18	Submitted by BY Liu

Antenna Specification

1.1 Voltage Standing Wave Ration (VSWR)

The VSWR will be below or equal to the value in table 1

	Frequency(MHz)	VSWR, free space
GSM TX	880-915	4.5:1
GSM RX	925-960	4.5:1
DCS TX	1710-1785	4.5:1
DCS RX	1805-1880	4.5:1
PCS TX	1850-1910	4.5:1
PCS RX	1930-1990	4.5:1
bluetooth	2400-2483	2.5:1

Table 1

1.2 Antenna Efficiency

The antenna efficiency is the average value over the specified frequency band for GSM, DCS, PCS and bluetooth . The antenna efficiency includes the reflection loss due to impedance mismatch at the antenna in free space.

	Frequency(MHz)	Average efficiency
GSM	880-960	26%
DCS	1710-1880	39%

PCS	11850-1990	45%
bluetooth	2400-2483	60%

Table 2

1.3 Antenna gain

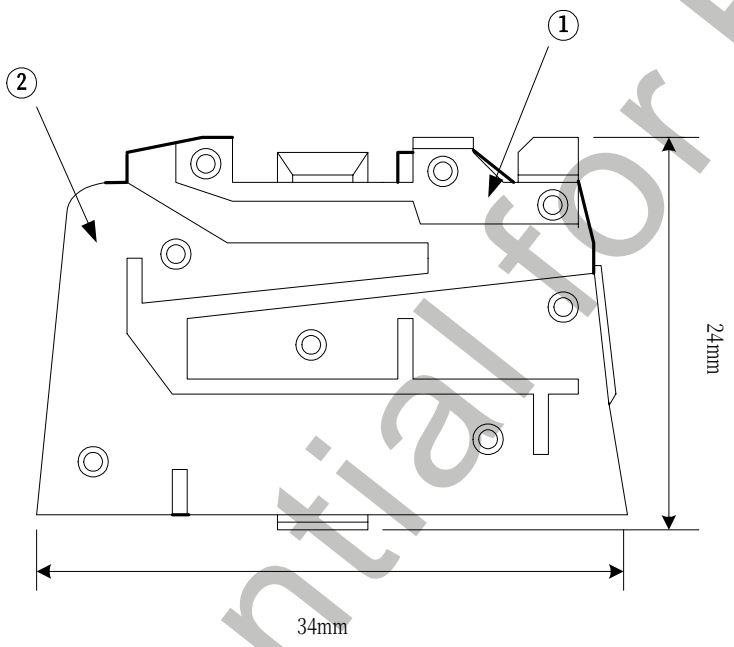
Band	Max Peak gain (dBi)
GSM900	-4
GSM1800	-1
GSM1900	-2
BT	+1

1.4 Coupling between Antenna Element

The coupling between the bluetooth antenna element and the antenna element for GSM, DCS and PCS=11dB or lower.

2. Antenna Dimension

The Antenna of Konstanze mobile including GSM (Triple-Band) and Bluetooth in one, as the graph shows below, the top section (1) on the plane is BT antenna, and the bottom section (2) on the plane is GSM antenna, in the other world, the BT and GSM are coplanar. The antenna type of Konstanze is PIFA, and the dimension is 24mm×34mm.



Konstanze Antenna (GSM & BT)