



Specification

SPECIFICATION

- Part No. : **PC-2802**
- Specification No : PC-2802-09
- Product Name : **TheStripe™ Penta-band
GSM 850/900/1800/1900MHz & UMTS/WCDMA 2100MHz
80mm*20mm PCB Antenna**
- Features : 80mm*20mm*0.8mm (PCB) with
77mm long, 1.13mm diameter Ipex MHFI (U.FL)
Tuned for Freespace



Photo :

REVISION STATUS

Version	Date	Page	Revision Description	Prepared	Approved
01	Feb 22 nd 2007	All	Preliminary Specification	TW Product Centre	Ronan Quinlan



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1.0 Introduction

This miniaturized, low profile, PCB antenna is based on smart **TheStripe™** antenna technology. It consists of a PCB antenna and mini coaxial cable. The Penta-band product is a Quadband GSM plus UMTS/WCDMA(3G) antenna for worldwide use. The antenna is suitable for benchmark testing in freespace with the client's device.

Further optimization can be achieved upon receipt of the client's device at a local Taoglas facility.

2.0 Antenna Performance

Taoglas PC-2802-09

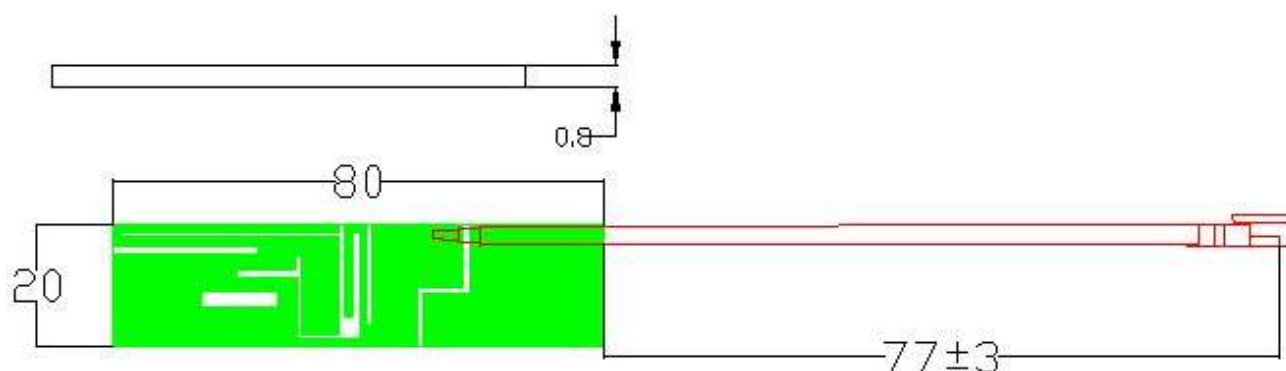
3.1	Communication System	AMPS	GSM	DCS	PCS	UMTS/WCDMA (3G)
3.2	Frequency Band	850 MHz	900 MHz	1800 MHz	1900 MHz	2100 MHz
3.3	Return Loss	-4.45	-11.94	-11.36	-11.78	-20.10
3.8	Impedance	50 Ohm				
3.9	Radiation Pattern	Omni-directional				
3.10	Polarization	Horizontal				



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3.0 Mechanical Specifications

3.1 Dimensions and Drawing



NOTE:

- 1. Unit:mm
- 2. 1.13 Cable
- 3. PCB thickness 0.8mm

3.2 Cable and Connector

3.2.1	RF Cable	RF Coaxial Cable $\varphi 1.13 \pm 0.1\text{mm}$ L = 77 +/- 3 mm Grey Colour
3.2.1	RF Connector	Ipex MHFI (Hirose U.FL)



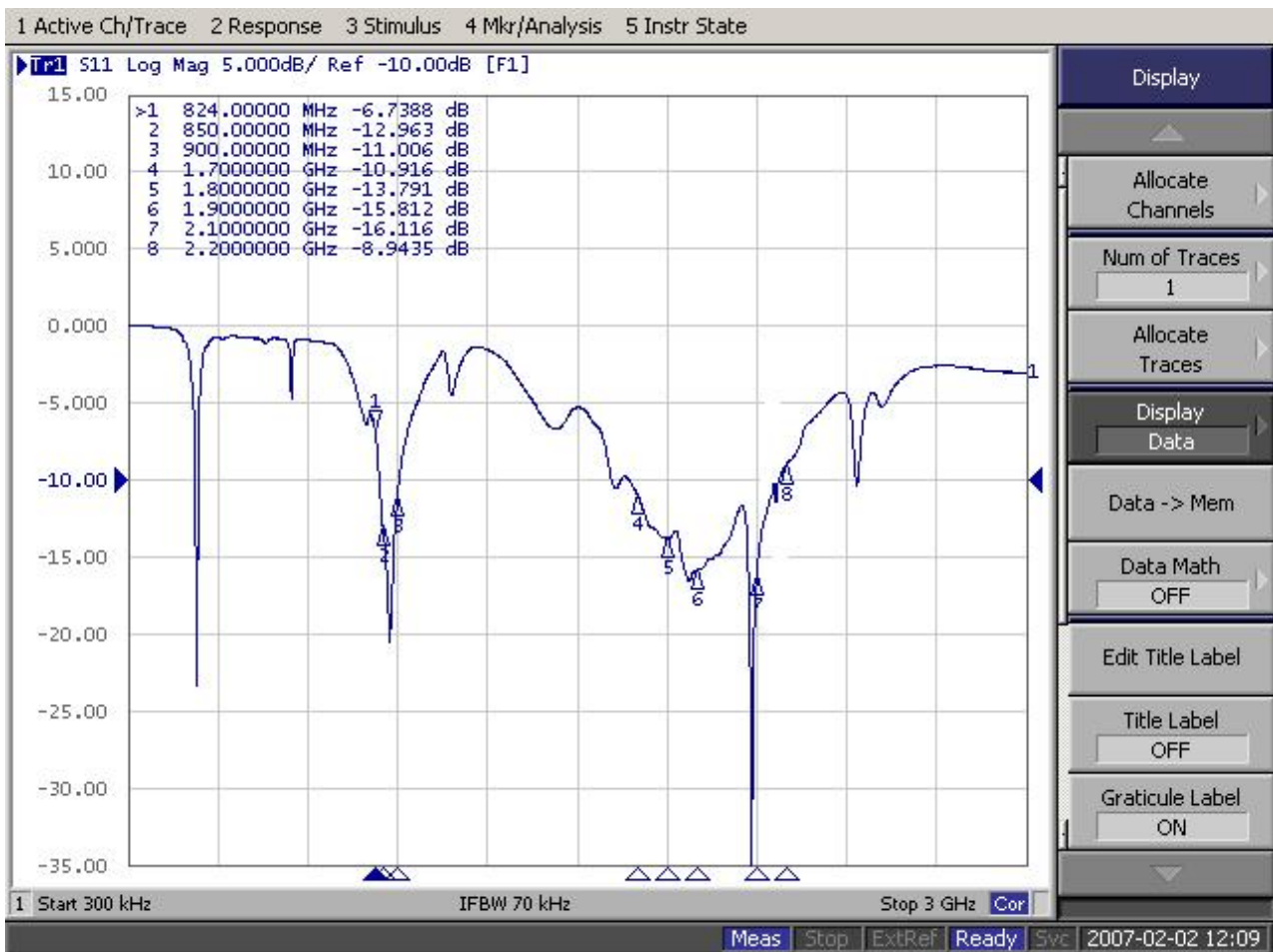
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4.0 Antenna Placement

This antenna is designed for freespace testing with the antenna outside the client's device on an isolation such as plastic foam block. Actual mounting can be as customer requirement, for example place in slot in housing, pre-applied double-sided tape, or pre-cut holes for screwmounting

5.0 Antenna Electrical Characteristics

5.1 Return Loss





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6.0 Environmental Conditions and Reliability

6.1 Environmental Conditions

2.1.1	Operation Temperature	-20°C to + 65°C
2.1.2	Storage Temperature	-30°C to + 75°C
2.1.3	Relative Humidity	40% to 95%

6.2 Reliability

Test Items	Procedure	Requirement
Thermal Shock	Starting at -40 for 30minutes and then cycled to +85 to remain 30minutes (a complete cycle). To repeat 5 complete cycles. (Refer to IEC 68-2-14 Method Na)	<ol style="list-style-type: none"> The value of return loss must be within product specifications after this test. No physical deformation should be evident.
Storage Temperature (Cold)	Samples must be put into -30°C chamber for 72 hours and samples shall be powered during test. (Refer to IEC 68-2-1 Method Aa)	<ol style="list-style-type: none"> The value of return loss must be within product specifications after this test. No physical deformation should be evident.
Storage Temperature (Dry Heat)	Samples must be put into +75°C chamber for 72 hours and samples shall be powered during test. (Refer to IEC 68-2-1 Method Ba)	<ol style="list-style-type: none"> The value of return loss must be within product specifications after this test. No physical deformation should be evident.
Operating Temperature (Cold)	Samples must be put into -20°C chamber for 2 hours and samples shall be powered during test. (Refer to IEC 68-2-1 Method Aa)	<ol style="list-style-type: none"> The value of return loss must met specification during test/after test No mechanical defects after test.
Operating Temperature (Dry Heat)	Samples must be put into +65°C chamber for 72 hours and samples shall be powered during test. (Refer to IEC 68-2-1 Method Ba)	<ol style="list-style-type: none"> The value of return loss must met specification during test/after test no mechanical defects after test.



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7.0 Antenna Packaging

