

GPS088

Penta Band GSM + GPS Combination Antenna

General Description

The GPS088 antenna has been specifically designed for the demands of today's Telematics and AVL systems. Combining a penta-band (850/900 1800/1900MHz, 2.1-2.5GHz) cellular quarter wave planar antenna with a high performance amplified GPS module in a single, low profile, adhesive pad mounted wedge. The GPS088 is ideally suited to manufacturers supplying GPS receivers with an integrated LNA. Delivering 18dBi (nominal) at the connector, it also meets the specification of most "high sensitivity" GPS receivers. The GPS088's unique shape lends itself to a range of internal mounting options.



*Test conditions 3V, 25°C

GPS Section	Min	Typ	Max	Unit
Centre Frequency*	1572.42	L1, 1575.42	1578.42	Band MHz
Impedance*		50		Ohms
Bandwidth (-10dB point)*		10		MHz
Attenuation ($f_0 \pm 100\text{MHz}$)*		≥ 25		dB
Axial Ratio*		4		dB
VSWR*			2:1	-
Noise Figure*		1.5		dB
LNA Gain*	26			dB
Overall Gain* (Patch+LNA+Cable)	18			dBi
Supply Voltage	2.5	3.0	5.5	Volts
Supply Current*	8	12	20	mA
Cable Length	4		4.1	m
Cable Type	RG174			
Connector	MMCX Plug; SMB Jack			
Type	25mm x 25mm Ceramic Patch			
Polarisation	Right Hand Circular			

GSM Section		Unit
Frequency	824-849 / 869-894 (GSM 850 Band) 880-915 / 925-960 (GSM 900 Band) 1710-1785 / 1805-1880 (GSM 1800 Band) 1850-1910 / 1930-1990 (GSM 1900 Band) 2110-2170 (WCDMA 2100)	MHz
Gain (Typ)	2.0	dBi
VSWR	<2:1 in all bands	-
Impedance (Typ)	50	Ohms
Cable Length	4 (-0, + 0.1)	m
Cable Type	RG174	
Connector	SMA Plug	
Type	1/4 Wave	
Polarisation	Vertical	

The above data is to be used as baseline information only. For a more detailed specification, application support or application approval samples, please contact our technical support help desk on +44 (0)1522 884750. We reserve the right to modify the specifications without prior notice.

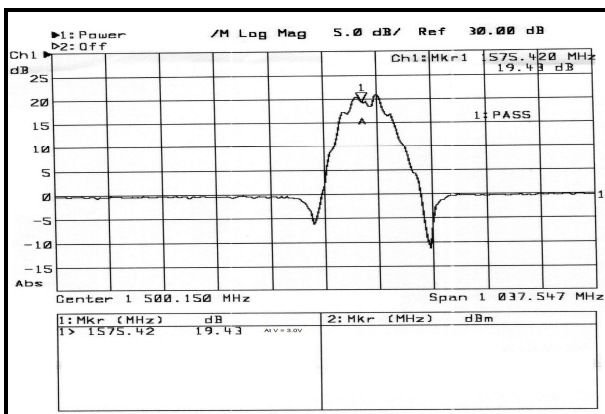
Physical / Environmental		Unit
Size (Nominal)	110L x 36W x 19H	mm
Weight Typ (including connectors and cable)	130	grams
Operating Temperature	-40 to +85	°C
Storage Temperature	-40 to +100	°C
Humidity	95 Max	%
Colour	Black	
Material	ABS Plastic	
Mounting	Double sided self adhesive pad.	
Mounting Pad Size	97L x 30W x 1 thick	mm
Mounting Pad Colour	Black	
Sealing	Waterproof	
RoHS Compliance	Yes	
Approved to	ECE Regulation/EEC Directive 72/245	
Approval Number	"e" 11*72/245*95/54*3741*00	

Orientation Identification:

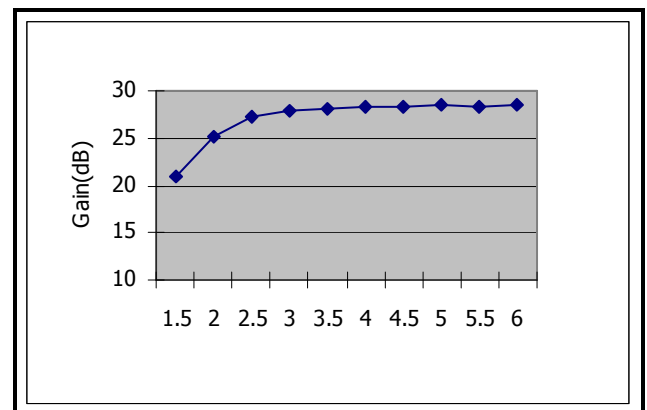
Satellite side – marked with a round blue sticker – 10mm diameter with black writing: **“THIS SIDE TO THE SKY”**



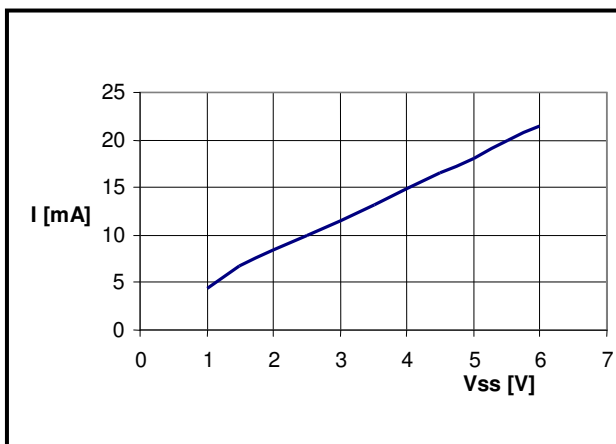
Typical characteristics of the GPS088



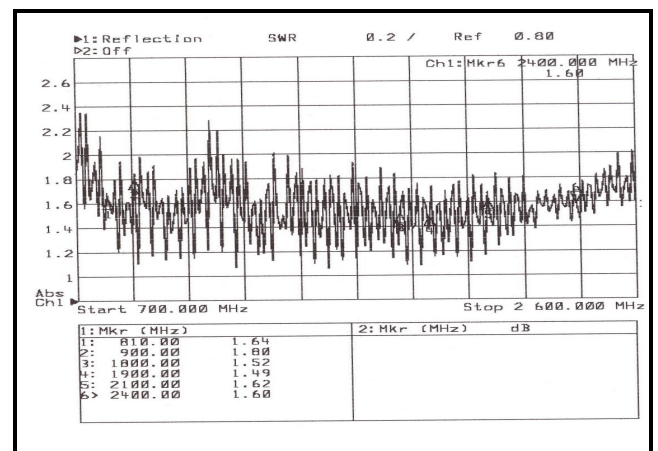
GPS - Gain v Frequency



GPS – LNA Gain v Voltage



GPS – Voltage v Current



GSM – VSWR Plot

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