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M1227SPT2512A Ceramic Patch for Precision GPS L1/L2 Bands



PRODUCT DESCRIPTION

The M1227SPT2512A uses Stacked Patch Technology to achieve greater than +2.5dBi performance in both GPS L1 and L2 bands for “dual-frequency” Precision GPS applications. This very small 25mm (base) x 12mm (height) size and lightweight features this Precision GPS antenna perfect for airborne applications (commercial and military). With axial ratio less than 2 dB, upper-hemisphere efficiency >75%, and high-linearity LNA enables this small Precision GPS antenna to operate in the most extreme and demanding applications giving maximum satellite reception, ultra-low Dilution of Precision (DOP), and decimeter accuracy. The interface connector is available in SMA/SMB/SMC, BNC/FME/TNC, and MCX/MMCX options.

PRELIMINARY SPECIFICATIONS

	Min	Typical	Max	Unit
Frequency GPS L1	1570	1575.42	1580	MHz
Frequency GPS L2	1222.6	1227.6	1232.6	MHz
Polarization		RHCP		
Efficiency (upper hemisphere)		75		% (upper hemisphere)
Total Realized Gain	+14	+16	+16.5	dBi
LNA Noise Figure		0.85		dB
LNA Input P1dB	+2	+4	+6	dB
LNA DC Voltage	2.5	3	5	V
LNA DC Current	20	25	50	mA
Out of Band Rejection (800MHz)		TBD		dBc
Out of Band Rejection (1.9GHz)		TBD		dBc
Beamwidth (3dB)	120°	140°		degrees (both axis)
Bandwidth (1dB)		10		MHz
Cross Pole Rejection	15			dB
Axial Ratio	1	2	3	dB
Front to Back Ratio		15		dB
Return Loss	-18		-24	dB
Impedance		50		Ohms
Overall Dimensions	53 (length) x 34 (width) x 18 (height)			mm
Operating Temperature	-40	20	+75	°C

