

M1575HCT-15A-SMA

HIGH PERFORMANCE ACTIVE GPS ANTENNA

Ordering Part #: 100-00028-07

Description

The M1575HCT-15A-SMA is a high performance dual stage LNA active antenna designed for the GPS L1 band, and built on Maxtena proprietary Helicore™ technology. This technology provides exceptional pattern control, polarization purity and high efficiency in a very compact form factor. The M1575HCT-15A-SMA is a screw-on design, featuring an integrated SMA connector. The ultra light design is rated IP67 when mounted and unmounted for added protection and includes an internal O-ring. This product is ideal for applications requiring high quality reception of GPS signals.

General Specifications

Parameter	Design Specifications
Operating temp.	from -40°C to 85°C
Weight	10.6 grams (typical)
RF connector	Screw mount SMA

Environmental Specifications

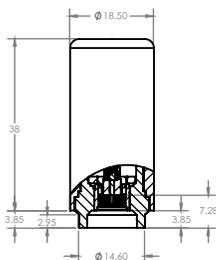
Parameter	Compliance
RoHS	Compliant
MIL-STD-810G	Compliant

Electrical Specifications

Parameter	Design Specifications
Frequency	1575.42 MHz (GPS)
Polarization	RHCP
Total active gain	28 dBic (typical) @ 3.3 V
Passive gain	-2.5 dBic (typical)
Beamwidth	140° (both axes)
Axial ratio	1 dB (max) @ zenith
Input P1dB	-31 dBm
Noise figure	0.8 dB (typical) LNA chain only
Supply voltage	1.5 - 3.7 V
DC current	30 mA (typical) @ 3.3 V
Filtering	>30 dB rejection @1575 +/- 100 MHz

Mechanical Specifications / Mounting Interface

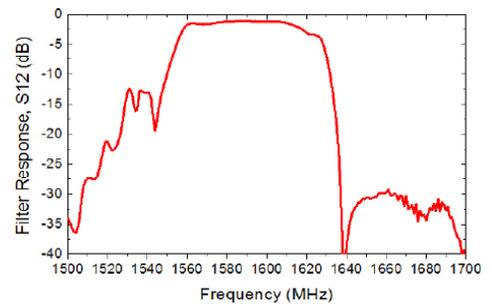
dimensions are in mm



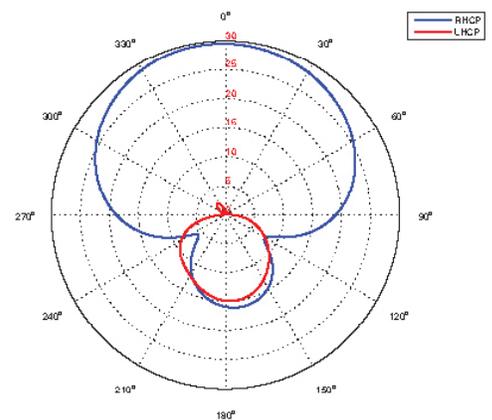
Applications

- Military & security
- Asset tracking
- Oil & gas industries
- Navigation devices
- LBS & M2M applications
- Handheld devices
- Law enforcement

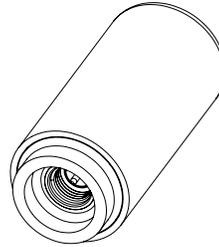
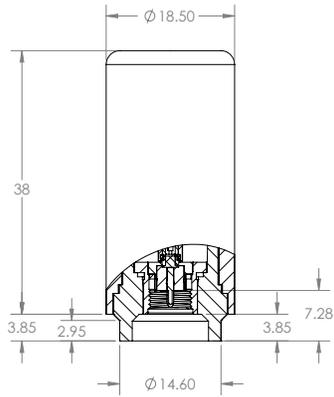
Filter Response



Typical Radiation Pattern (@ 3.3 V)



CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY



NOTES:

1. CONNECTOR TYPE: SMA MALE
2. HOUSING MATERIAL: ABS PC, SABIC CYCOLOY C1200HF-701
3. COLOR: BLACK
4. FLAMMABILITY: UL 94 HB
5. DUST AND WATER-RESISTANCE: IP67
6. UNLESS OTHERWISE NOTED DIMENSION < 20MM, ±0.1MM; <50MM, ±0.2MM.

PROPRIETARY AND CONFIDENTIAL

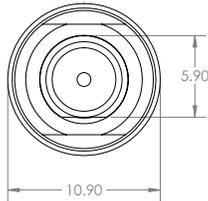
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UNLESS OTHERWISE SPECIFIED:		NAME	DATE	MAXTENA, INC	
DIMENSIONS ARE IN MM	DRAWN	XXL		TITLE: 100-00028-07	
TOLERANCES:	CHECKED	NPC			
FRACTIONAL ±	ENG APPR:	SP			
ANGULAR: MACH ± BEND ±	MFG APPR:				
TWO PLACE DECIMAL ±0.10	Q.A.			SIZE	DWG. NO.
THREE PLACE DECIMAL ±	COMMENTS:			B	
INTERPRET GEOMETRIC TOLERANCING PER:				CAGE: 5KQH7	SCALE: 2:1
MATERIAL:					SHEET 1 OF 2
FRESH					REV 0
DO NOT SCALE DRAWING					

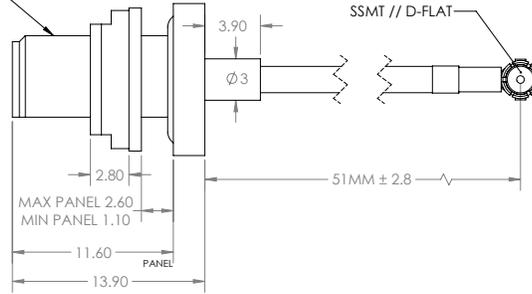


CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY

VIEW WITH HARDWARE REMOVED



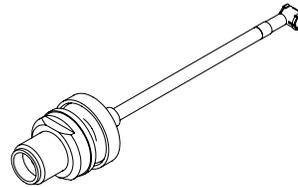
30 PSIG PER STI 8.2.4-13



SSMT // D-FLAT

NOTES:

1. FREQUENCY RANGE: DC-6GHZ
2. IMPEDANCE: 50 OHMS
3. TEMP RANGE: -40 / +85°C
4. COAXIAL CABLE: $\phi 1.32$ MM
5. SURFACE FINISH: BLACK OXIDE
6. MATERIAL: SS303 PASSIVATE PER AMS-2700, AND BLACK OXIDE COATING PER MIL-DTL-13924, CLASS 4
7. O-RING: SI RUBBER, A-A-59588, CL-1B, GR-60, BLACK
8. CONTACT RETENTION: 6 LBS AXIAL, 4 IN*OZ TORQUE
9. CONNECTOR: SSMT R/A PER TE SMA
 INTERFACE PER MIL-STD-348
 DUST AND WATER-RESISTANCE: IP68
 DURABILITY: 5000 CYCLES
 CORROSION: MIL-STD-202, M101, COND A
 VIBRATION: MIL-STD-202, M204, COND D, 20G M214, COND 1-F, 21g
10. CABLE (DIMENSIONS IN INCH):
 .052 JACKET FEP
 .040 BRAID AG/CU
 .030 CORE PRFE
 .010 CONDUCTOR AG/CU/STEEL
11. UNLESS OTHERWISE NOTED DIMENSION < 20MM, ± 0.1 MM; < 50MM, ± 0.2 MM.



UNLESS OTHERWISE SPECIFIED:		NAME	DATE	MAXTENA, INC	
DIMENSIONS ARE IN MM	DRAWN	XXL		TITLE:	
TOLERANCES:	CHECKED	NPC		103-00012-02	
FRACTIONAL ±	ENG APPR:	SP		SIZE	DWG. NO.
ANGULAR: MACH ±	MFG APPR:			B	
BEND ±	Q.A.			REV	0
TWO PLACE DECIMAL ±	COMMENTS:			CAGE: 5KQH7	SCALE: 2:1
THREE PLACE DECIMAL ±				SHEET 2 OF 2	
INTERPRET GEOMETRIC TOLERANCING PER:					
MATERIAL:					
FINISH:					
DO NOT SCALE DRAWING					

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Cable/Connector Specifications

Parameter	Compliance
RoHS	Compliant
MIL-STD-810G	Compliant
MIL-STD-202	Compliant



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