

Professor Technology Co., Ltd.

Sirius/XM Satellite Radio Truck (RV) antennas

CPX-T312 CPX-T320



CPX-T312

CPX-T320

SPECIFICATION FOR SDARS ANTENNA WITH LOW NOISE AMPLIFIER

CAUTIONS

CPX-T312 & CPX-T320 series are applied for satellite Digital Audio application. Those are using for Sirius and XM satellite radio broadcasting as a Antenna device.

1. The application products are such as cars for Sirius and XM radio.
2. The CPX-T312 & CPX-T320 is truck mirror mounting & water proof antenna, and the antennas application for most Truck & RVcars.

1.0 SYSTEM

This antenna system consists of two functional blocks, the LNA portion and the antenna element.

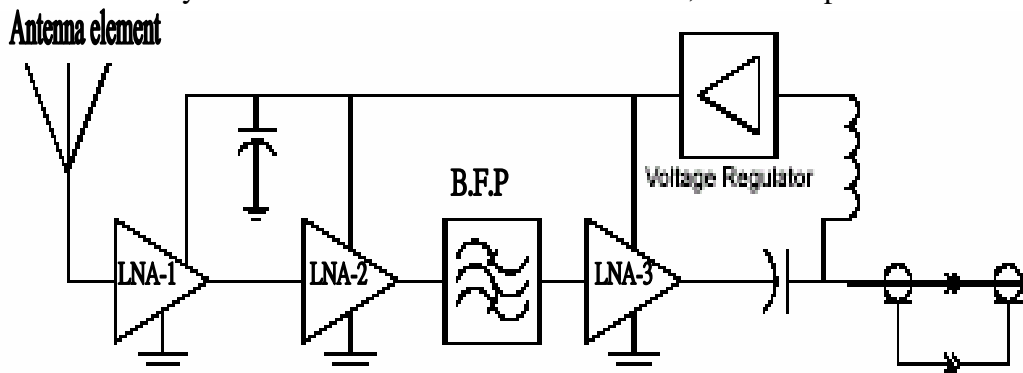


Fig. 1

2.0 ENVIRONMENTAL CONDITIONS

2.1	Operation Temperature	-30°C to + 80°C
2.2	Storage Temperatur	-40°C to + 100°C
2.3	Relative Humidity	40% to 95%

3.0 ELECTRICAL SPECIFICATIONS

3.1	Operation Voltage	Min: 3.6V	Typ: 4.75V	Max: 5.5V
3.2	Power Consumption	@ 4.75V	Typ: 49 – 58 mA	Max: 62 mA

4.0 MECHANICAL SPECIFICATIONS

4.1	Shock	10msec. Half sine wave.
4.2	Vibration	10~200Hz Log. Sweep 3.0G sweep time: 15 Minutes, 3 Axes.
4.3	Weight	20g Max.
4.4	Dimension	See Fig. 2

5.0 ANTENNA ELEMENT

5.1	Frequency Range	2326.5 ± 6.25 MHz.(Sirius) 2338.8± 6.25 MHz. (XM)
5.2	Polarization	LHCP
5.3	Bandwidth	50MHz min (Return Loss ≤ -10 dB)
5.4	Gain at Zenith	+5.0 dBic typ
5.5	Axial Ration (at Zenith)	3.0dB max

Condition: With 50mm square ground plane

6.0 LNA

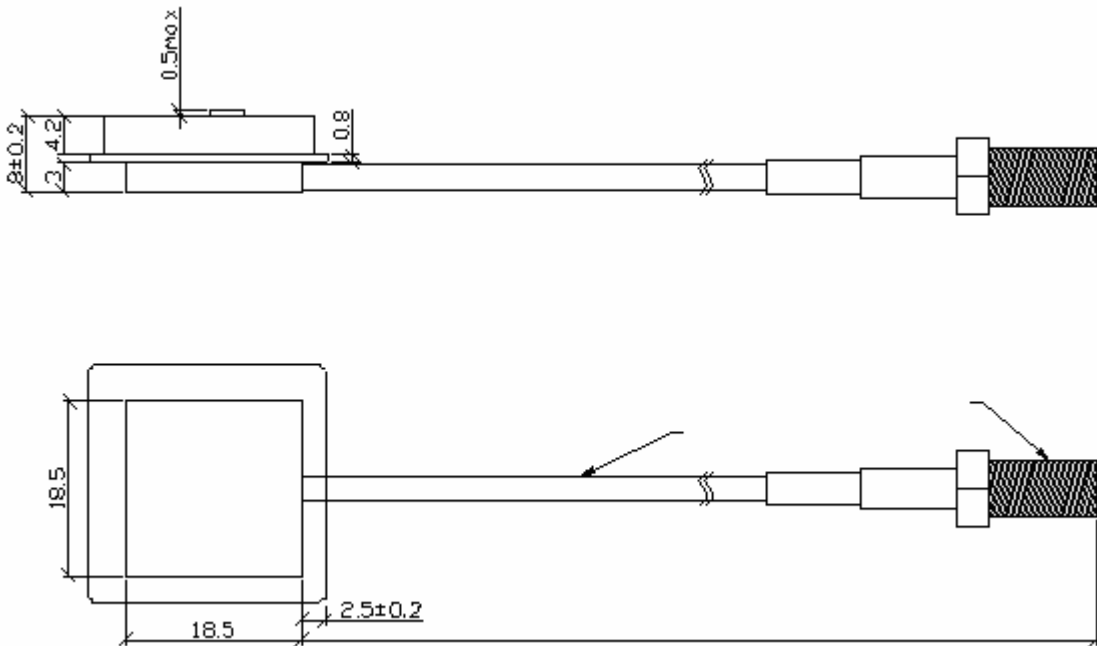
6.1	Frequency Range	2326.5 ± 6.25 MHz.(Sirius) 2338.8± 6.25 MHz. (XM)
6.2	Gain	Min: 33dB Typ: 36dB (+ 25 °C ± 5°C)
6.3	Noise Figure	1.0 dB Max. (+25 °C ± 5°C) 1.4 dB Max (+85 °C)
6.4	Filter attenuation at 2332.75 ± 230MHz	> 25 dB
6.5	Interfering P1dB at 1850-1990MHz	> - 10 dB
6.6	Interfering P1dB at 824~894MHz	> - 4 dB

6.7	Interfering P1dB at 450MHz	> 0 dB
6.8	ESD	Antenna surface $\pm 15KV$ / Connector pin $\pm 8KV$

7.0 TOTAL SPECIFICATIONS (Through Antenna, LNA, Cable and Connector)

7.1	RF Cable	RG174 / $\phi 2.7 \pm 0.1mm$, Black
		RG58U / $\phi 5.0 \pm 0.1mm$, Black
	Cable Length	RG174(250mm) RG58 (6,000mm)
7.2	RF Connector	RG174 SMA (F) RG58 SMA/M +SMB/M R/A
7.3	Frequency Range	2326.5 \pm 6.25 MHz (Sirius)
		2338.5 \pm 6.25 MHz (XM)
7.4	Active Gain at Zenith	38 dBic Typ (Sirius)
		36 dBic Typ (XM)
7.5	Output Impedance	50 Ω
7.6	VSWR	2.0 Max

Note 1: Mounted On the 100cm * 100cm round ground plan



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