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GPS ANTENNA WITH LOW NOISE AMPLIFIER

GPA-017S

SPECIFICATION

PRELIMINARY

**BY FURUNO ELECTRIC CO., LTD.
SYSTEM PRODUCTS DEVELOPMENT &
MARKETING DIVISION**

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1. Scope

This paper describes outer shape, mechanism and characteristics of GPS antenna.

2. Model name

GPS antenna GPA-017S

3. Performance

3.1. Ratings

Item	Rating
Operating temperature	-25°C to +65°C
Storage temperature	-35°C to +75°C
Operating relative humidity	<95% RH (without condensation)
Power voltage	5.0VDC

3.2. Electrical characteristics

3.2.1 Antenna

Item	Remarks
Frequency range	1,575.42MHz ± 1.023MHz
Polarization	R. H. C. P. (Right Hand Circular Polarization)
Gain	> 2.0dBi (at 90° elev. angle) > -4.0dBi (at 10° elev. angle)
Axial ratio	< 4.0dBi (at 90° elev. angle)

3.2.2. LNA (not including cable, at 25 ± 5°C, 65 ± 20% humidity)

Item	Ratings	Criteria for environmental tests
Frequency range	1,575.42MHz ± 1.023MHz	1,575.42MHz ± 1.023MHz
Gain	27.5 ± 5.5dB	26.5 ± 5.5dB
Noise figure	<1.6 dB	<1.8dB
Out band attenuation	fo ± 20MHz (>7dB) fo ± 50MHz (>20dB) fo ± 100MHz(>30dB) (fo=1575.42MHz)	fo ± 20MHz (>6dB) fo ± 50MHz (>19dB) fo ± 100MHz(>28dB) (fo=1575.42MHz)
Output VSWR	<2.0	<2.0
Supply voltage	4.75 ± 0.75VDC (See Note *1)	
Power consumption	<25mA	

*1 Supply voltage: Reversed Bias-T may cause damage.