

# 9. APPENDIX

## 1. Antenna Specifications

1-1. Vendor: Ace Technology

1-2. Vendor P/N:

1-3. Electrical characteristics

		TX	RX
Frequency band		824MHz – 849MHz	869MHz – 894MHz
VSWR (Free space)	Extended	2.2:1	2.2:1
	Retracted	3.0:1	3.0:1
Impedance (typical)		50 ohms	
Gain	Extended	-2.5dBd	-2.5dBd
	Retracted	-3.2dBd	-3.2dBd
Power (maximum)		0.6W	0.6W

1-4. Environment

Operation Temperature

- Low Operational Temperature: -20C

- High Operational temperature: +70C

- Method: The antenna is placed in a climatic chamber at High or Low Temperature.

The antenna is taken out after 1 hour, and the VSWR is immediately measured.

Temperature Cycling

- Low Temperature Cycling: -40C

- High Temperature Cycling: +80C

- Method: The antenna is placed in a climatic chamber.

The temperature is cycled as follows:

The temperature is kept constantly at low temperature for 1 hour, increased to high temperature during 1 hour, kept constantly at high temperature for 1 hour, and then decreased to low temperature 1 hour. This procedure is repeated 10 times, ending at room temperature.

#### Humidity

Relative Humidity: 95%

- Temperature: +55C

- Method: The antenna is placed in a climatic chamber for 24 hours. The antenna is taken out from the chamber and measured after another 24 hours in room temperature.

#### Sinusoidal Vibration

Vibration Frequency: 8-25-8 Hz (1 cycle)

Sweep Rate: 1 octave/min (logarithmic)

Maximum Amplitude: 1.5mm

- Maximum Acceleration: 2g

- Crossover Frequency: 18.2Hz

Method: The extended antenna is assembled in the test equipment.

The vibration is one both X- and Z- directions, with a duration of 1 hour in each direction.

