

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.

1. GEN TOLERANCES: ± 0.2
2. RETRACTION & EXTENDING FORCE:
TOP: $200\text{gf} \pm 100\text{gf}$, STOPPER: $300\text{gf} \pm 150\text{gf}$
3. ANT' COLOR: GRAY(COLOR CHIP NO: G5295)

9	N / A	STOPPER	1	KSD5101-C3604	N1 PLATED	E
8	N / A	GUIDE TUBE	1	P.P.	COLOR:GRAY	IR
7	N / A	TUBE	1	P.B.T	COLOR:GRAY	IR
6	N / A	ELEMENT	1	N.T WIRE	COLOR:BLACK	A
5	N / A	METAL	1	KSD5101-C3604	N1 PLATED	A
4	N / A	FRAME	1	A.B.S	COLOR:GRAY	IR
3	N / A	COVER	1	URETHANE	COLOR:GRAY	IR
2	N / A	COIL	1	STEEL WIRE	N1 PLATED	A
1	N / A	TOP	1	ZYTEL E101L(P468)	COLOR:GRAY	IR
REV.						
REMARKS						
TITLE						
ANT' ASS'Y						
MATERIAL			PART NO.		PART NO.	
FINISH			N / A		SPEC.	
TOLERANCE			Angle		SPEC.	
SCALE			2/1 UNIT mm		DWG NO.	
REVISION			IR SHEET		SPEC.	
REVISION			CP NAME		SPEC.	
REVISION			SPH-A250		SPEC.	
REVISION			SPH-A250 <PROJECT>		SPEC.	
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