

FZE32EU SPECIFICATIONS

1. Scope

This Product Specification covers the mechanical, electrical and environmental performances specification for FZE32EU.

2. Product description

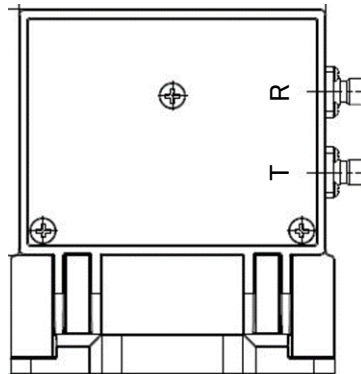
2-1. Antenna model

Antenna model: FZE32EU

2-2. Description

FZE32EU is a loop antenna for 150/230/300MHz band. It is a device that electromagnetically couples to the feeder cable. It is used in connection with a mobile modem of the FDK3x series of feeder radio modems. It transmits electromagnetically coupled signals from the feeder cable to the mobile modem, and electromagnetically couples signals from the mobile modem to the feeder cable.

The FZE32EU has two antenna connectors. "T" is for the 150 MHz and 300 MHz bands, and "R" is for the 230 MHz band. The frequency band is switched by putting a DC signal on the RF signal and inputting it to each terminal.



DC input		Frequency band
T	R	
L	H	150MHz band
H	L	230MHz band
H	H	300MHz band

3. General specification

Product name	FZE32EU
frequency	151 - 156MHz, 230 - 235MHz, 302 - 322MHz
Operating with matching	-10°C~+50°C
Storage with matching	-20°C~+70°C
RF power	100mW
Impedance with matching	50 Ohms
Antenna type	Loop Antenna
Connector type	SMA
Single weight	approx. 90g

4. Antenna specification

4-1. Electrical requirement

Frequency Range	151 - 156MHz	230 - 235MHz	302 - 322MHz
Peak Gain(max)	-40dBi max.	-30dBi max.	-45dBi max.
Average Total efficiency	>60%		
Return Loss	<10dB		
DC input	H : 3.3V±10% L : less than 0.4V		

4-2. Mecanical specification

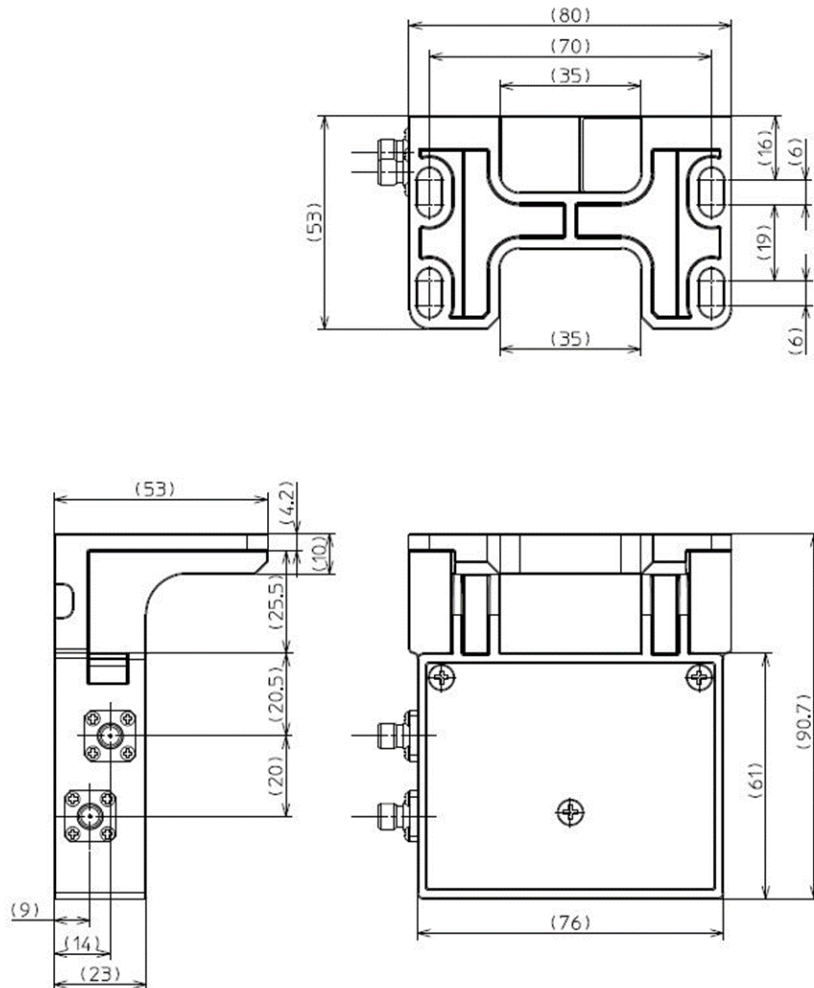
Connector Tightening Torque	0.8~1.1N・m
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5. Environmental specification

Description	Specification																																																
Temperature /Humidity cycling	<p>The following is one cycle and 10 cycles of the test shall be conducted.</p> <table><tr><td></td><td>Temperature</td><td>Humidity</td><td>time</td></tr><tr><td>a</td><td>+25℃→+50℃</td><td>93%</td><td>2.5h</td></tr><tr><td>b</td><td>+50℃</td><td>93%</td><td>3.0h</td></tr><tr><td>c</td><td>+50℃→+25℃</td><td>80～96%</td><td>2.5h</td></tr><tr><td>d</td><td>+25℃→+50℃</td><td>93%</td><td>2.5h</td></tr><tr><td>e</td><td>+50℃</td><td>93%</td><td>3.0h</td></tr><tr><td>f</td><td>+50℃→+25℃</td><td>80～96%</td><td>2.5h</td></tr><tr><td>g</td><td>+25℃</td><td>93%</td><td>1.0h</td></tr><tr><td>h</td><td>+25℃→-10℃</td><td>—</td><td>1.0h</td></tr><tr><td>i</td><td>-10℃</td><td>—</td><td>3.0h</td></tr><tr><td>j</td><td>-10℃→+25℃</td><td>—</td><td>1.5h</td></tr><tr><td>k</td><td>+25℃</td><td>93%</td><td>1.5h</td></tr></table> <p>After the test, there should be no problem with the characteristics.</p>		Temperature	Humidity	time	a	+25℃→+50℃	93%	2.5h	b	+50℃	93%	3.0h	c	+50℃→+25℃	80～96%	2.5h	d	+25℃→+50℃	93%	2.5h	e	+50℃	93%	3.0h	f	+50℃→+25℃	80～96%	2.5h	g	+25℃	93%	1.0h	h	+25℃→-10℃	—	1.0h	i	-10℃	—	3.0h	j	-10℃→+25℃	—	1.5h	k	+25℃	93%	1.5h
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Temperature Shock	<p>The device under test at -20℃⇔+70℃ by 6 cycles, Dwell of 30 mins, transition time between Dwell 30 secs (~ 61 mins / cycle) and each item should be measured after exposing them in normal temperature and humidity for 1h.</p>																																																
High Temperature	<p>Temperature:+50℃, time:94 hours</p> <p>2.There is no substantial obstruction to air flow across and around the samples, and the samples are not touching each other</p> <p>3. Parts should meet RF spec before and after test.</p>																																																

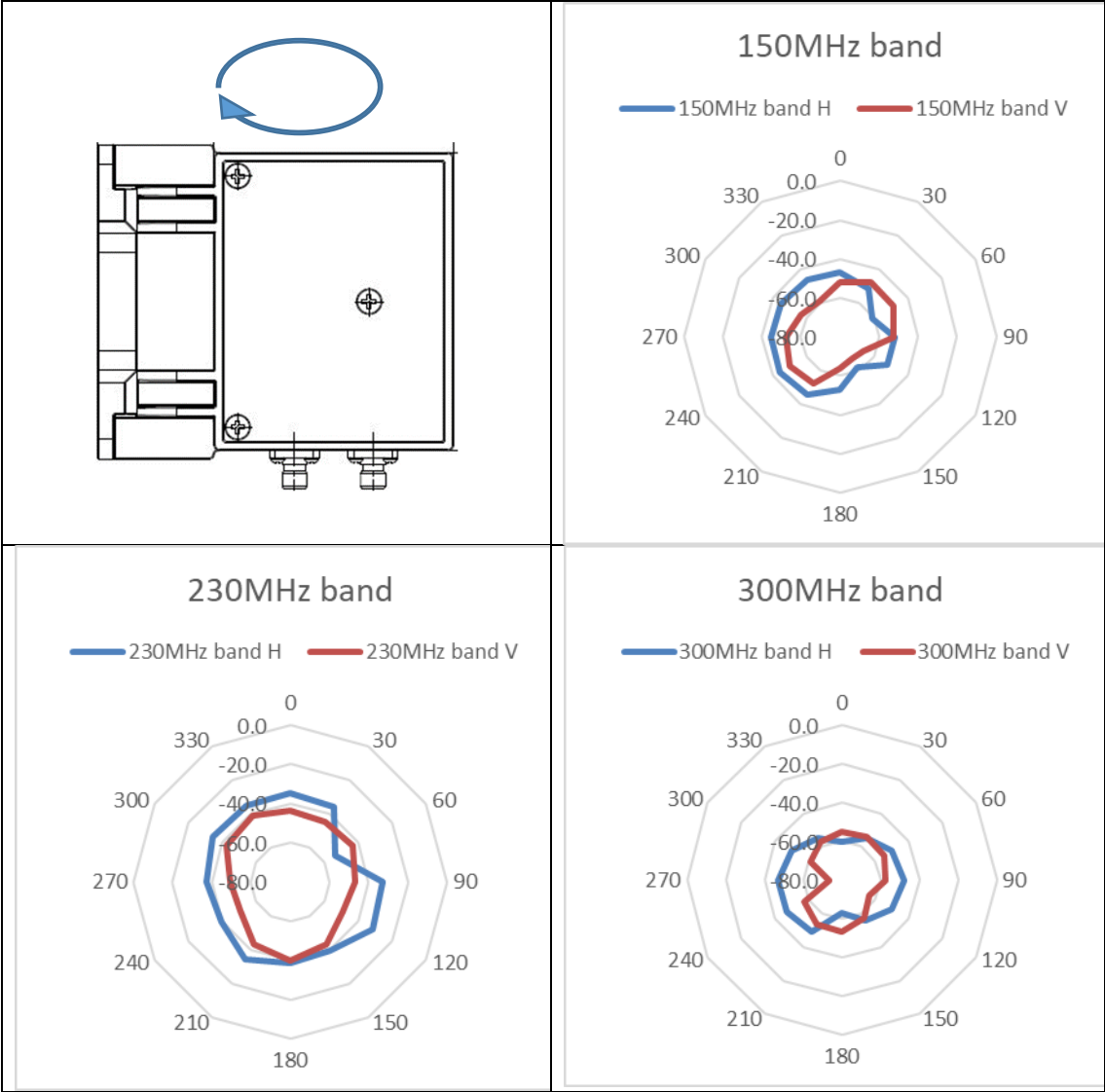
6. Dimension

Outer dimensions: 80(W) x 90.7(D) x 53(H) mm

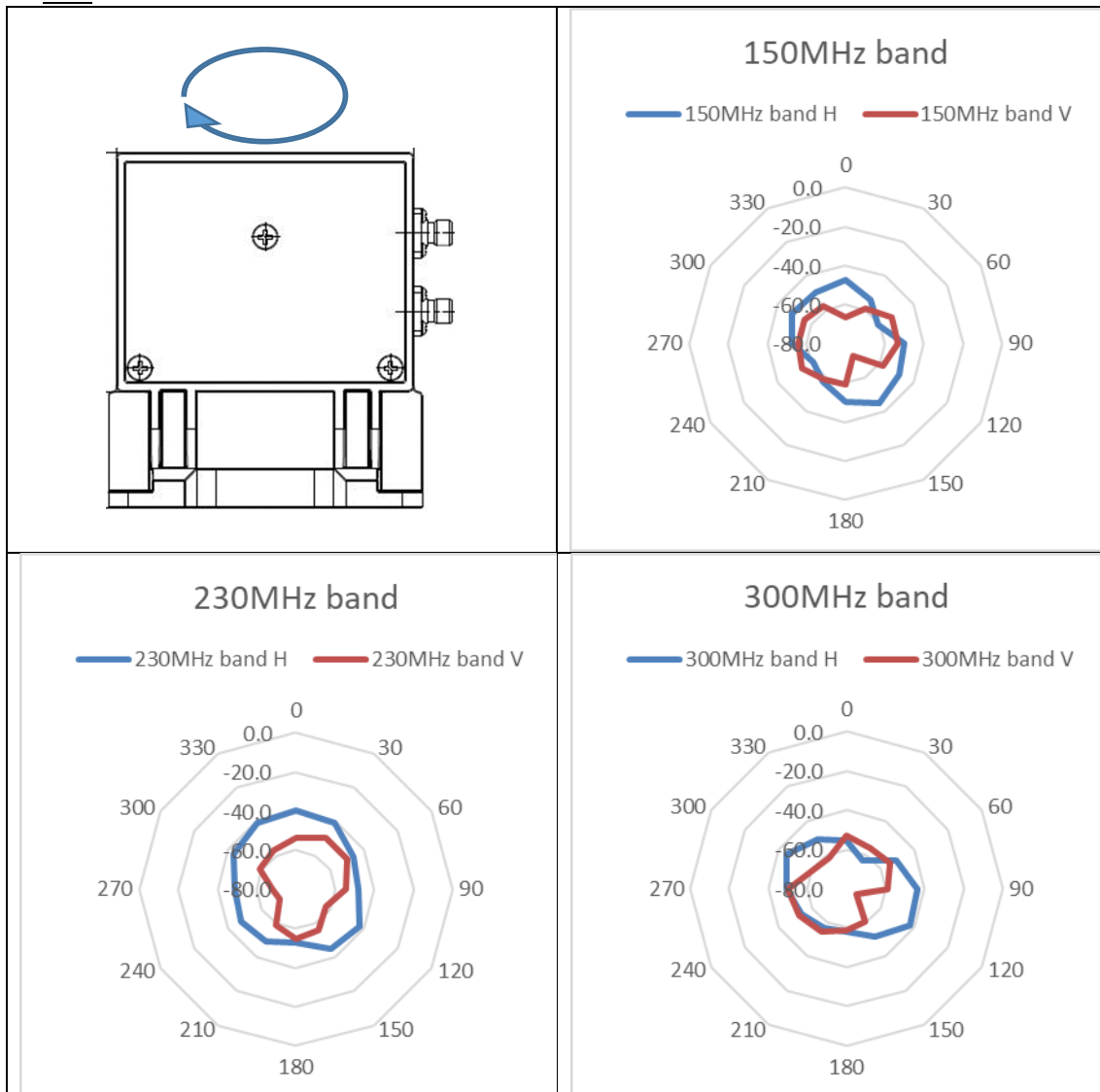


7. Radiation pattern

7-1. Pattern 1



7-2. Pattern 2



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