## **Multi-Band Antenna**

# +2db 'T' Bar GSM Quad Band

#### Features

- Quad Band Patch Antenna;
  - 824-960MHz
  - 1710-1990 MHz
  - 1900-2200 MHz
- Active gain: +3dBi
- VSWR < 2.0
- 3m RG174 Connecting Lead
- 3M Adhesive sticker on rear
- Ground plane independent
- Alternative connectors: FME/ TNC/SMA/MMCX



### Applications

- Embedded GSM
- Space Saving Applications
- Car Window

#### Description

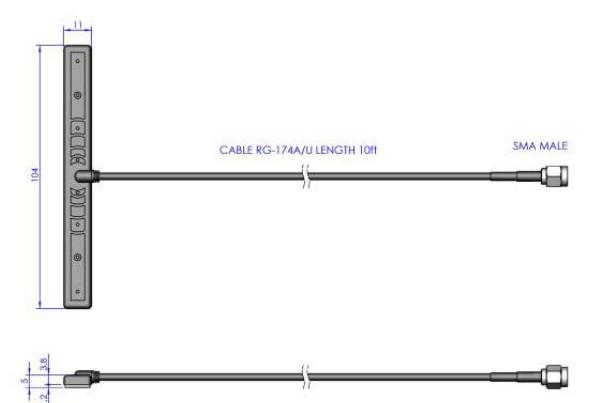
A compact PCB Antenna for GSM Cellular applications where high performance is required from a small size. Using the ANT-GSMQB will give optimum range and reliability to your application.

#### Ordering Information

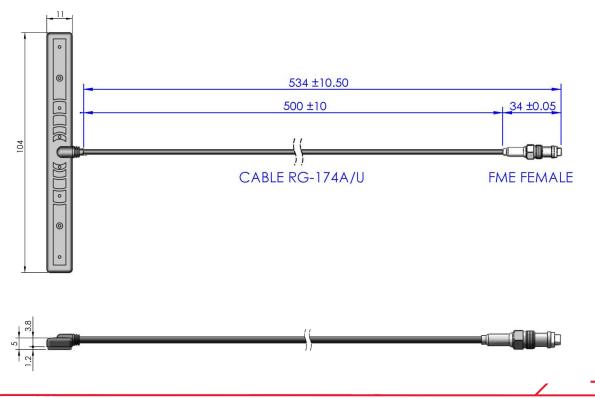
Part Number	Length	Width	Max Height	Cable Length	Connector
ANT-TBARQB-SMA	113mm	10mm	Зmm	Зm	SMA (M)
ANT-TBARQB-FMEF	113mm	10mm	3mm	Зm	FME (F)



### Mechanical Data SMA Version



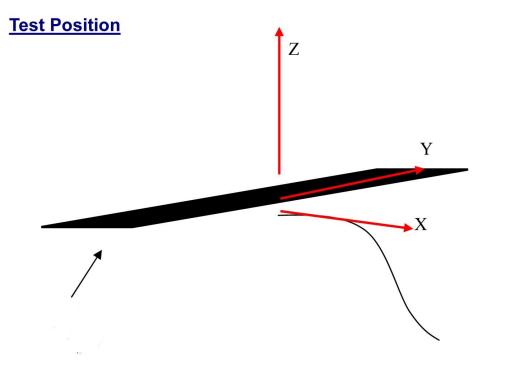
### Mechanical Data FME Version



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### Test Performance Data



### Measurement Equipment

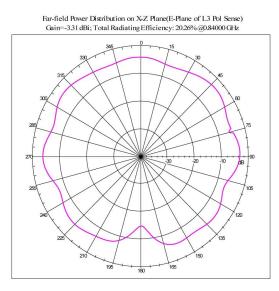
Vector Network Analyzer:	Rohdes Schwarz ZVM
Double Ridged Horn Ant:	Trimillenntum Corporation DRH0018-C900
Standard Horn Antenna:	Wavepro SG284 Wavepro SG187 Wavepro SG430
Spherical Antenna Measurement System:	Wavepro NSI-700S-90

### Measurement Uncertainty

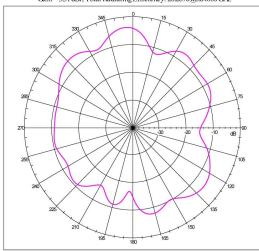
The measurement uncertainty is evaluated as 1.412dBi



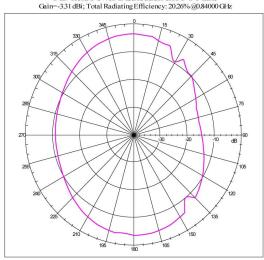


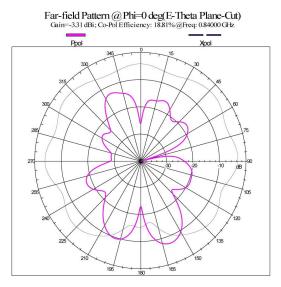


Far-field Power Distribution on Y-Z Plane(H-Plane of L3 Pol Sense) Gain=-3.31 dBi; Total Radiating Efficiency: 2026%@0.84000 GHz

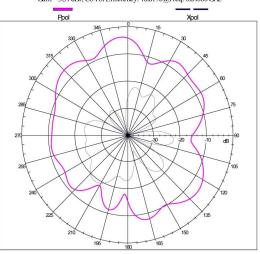


Far-field Power Distribution on X-Y Plane

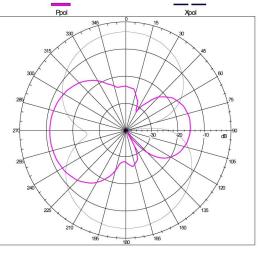




Far-field Pattern @ Phi=90 deg(E-Theta Plane-Cut) Cain=-331 dBi; Co-Pol Efficiency: 1881%@Freq: 0.84000 GHz



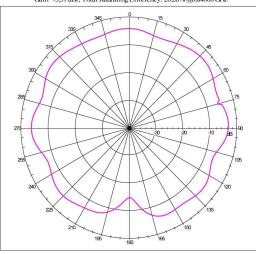
Far-field Pattern @ Theta=90 deg(E-Phi Plane-Cut) Cain=-331 dBi; Co-Pol Efficiency: 18.81%@Freq: 0.84000 GHz



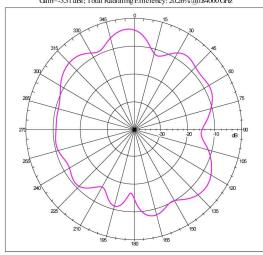
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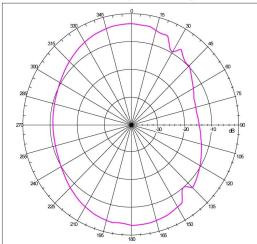
Far-field Power Distribution on X-Z Plane(E-Plane of L3 Pol Sense) Gain=-331 dBi; Total Radiating Efficiency: 2026%@0.84000 GHz



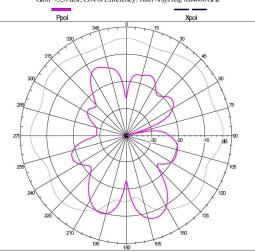
Far-field Power Distribution on Y-Z Plane(H-Plane of L3 Pol Sense) Gain=-331 dBi; Total Radiating Efficiency: 20.26% @0.84000 GHz



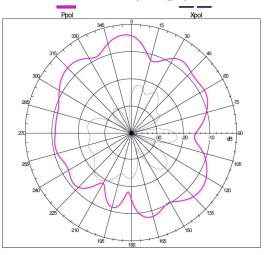
Far-field Power Distribution on X-Y Plane Gain=-331 dBi; Total Radiating Efficiency: 2026%@0.84000 GHz



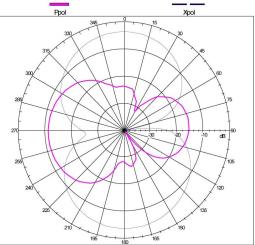
Far-field Pattern @ Phi=0 deg(E-Theta Plane-Cut) Cain=-331 dBi; Co-Pol Efficiency: 18.81%@Freq: 0.84000 GHz



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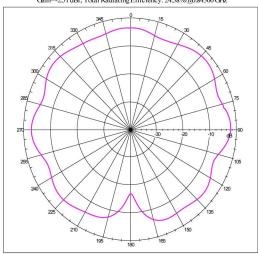


Far-field Pattern @ Theta=90 deg(E-Phi Plane-Cut) Gain=-331 dBi; Co-Pol Efficiency: 1881%@Freq: 0.84000 GHz

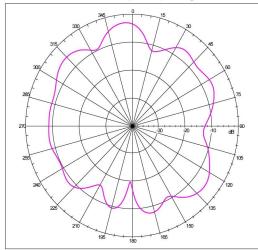




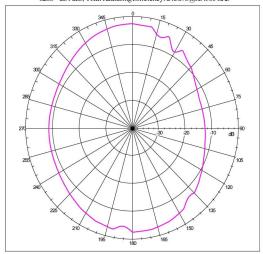
Far-field Power Distribution on X-Z Plane(E-Plane of L3 Pol Sense) Gain=-2.51 dBi; Total Radiating Efficiency: 24.58%@0.84500 GHz



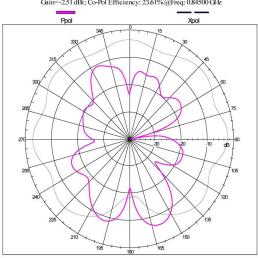
Far-field Power Distribution on Y-Z Plane(H-Plane of L3 Pol Sense) Gain=-2.51 dBi; Total Radiating Efficiency: 24.58%@0.84500 GHz



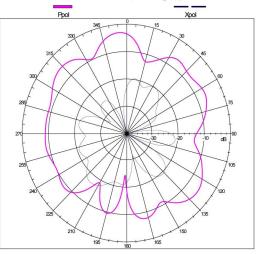
Far-field Power Distribution on X-Y Plane Gain=-2.51 dBi; Total Radiating Efficiency: 24.58%@0.84500 GHz



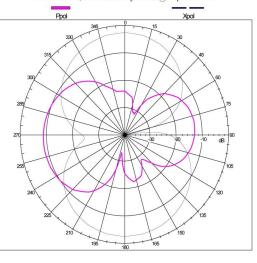
Far-field Pattern @ Phi=0 deg(E-Theta Plane-Cut) Gain=-2.51 dBi; Co-Pol Efficiency: 23.61%@Freq: 0.84500 GHz



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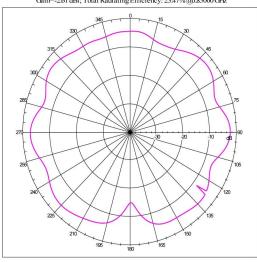
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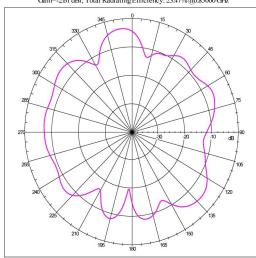
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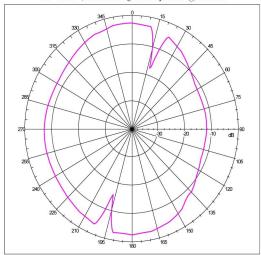
Far-field Power Distribution on X-Z Plane(E-Plane of L3 Pol Sense) Gain=-2.61 dBi; Total Radiating Efficiency: 23.47% @0.85000 GHz



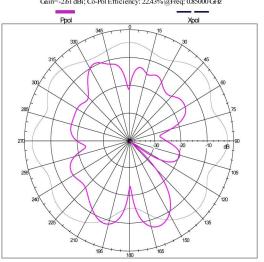
Far-field Power Distribution on Y-Z Plane(H-Plane of L3 Pol Sense) Gain=-2.61 dBi; Total Radiating Efficiency: 23.47% @0.85000 GHz



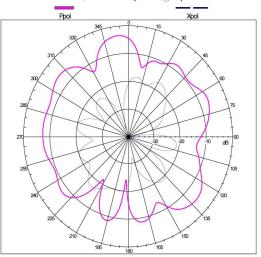
Far-field Power Distribution on X-Y Plane Cain=-2.61 dBi; Total Radiating Efficiency: 23.47%@0.85000 GHz



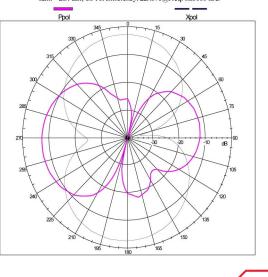
Far-field Pattern @ Phi=0 deg(E-Theta Plane-Cut) Gain=-2.61 dBi; Co-Pol Efficiency: 22.43%@Freq: 0.85000 GHz



Far-field Pattern @ Phi=90 deg(E-Theta Plane-Cut) Cain=-2.61 dBi; Co-Pol Efficiency: 22.43%@Freq: 0.85000 GHz

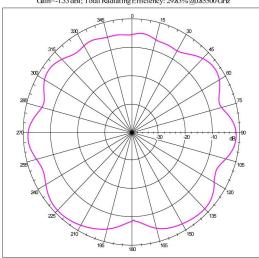


Far-field Pattern @ Theta=90 deg(E-Phi Plane-Cut) Cain=-2.61 dBi; Co-Pol Efficiency: 22.43%@Freq: 0.85000 GHz

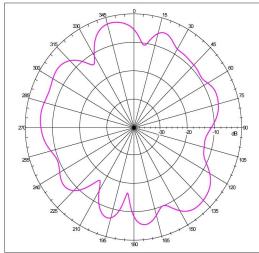


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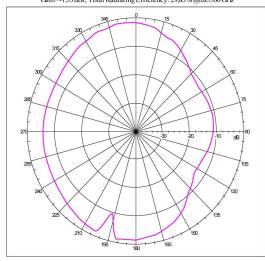
Far-field Power Distribution on X-Z Plane(E-Plane of L3 Pol Sense) Cain=-1.33 dBi; Total Radiating Efficiency: 29.83% @0.85500 GHz



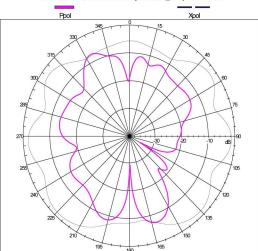
Far-field Power Distribution on Y-Z Plane(H-Plane of L3 Pol Sense) Gain=-133 dBi; Total Radiating Efficiency: 29.83%@0.85500 GHz



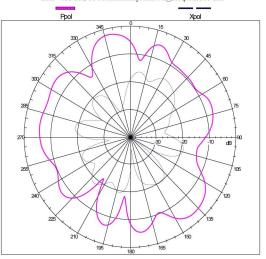
Far-field Power Distribution on X-Y Plane Gain=-1.33 dBi; Total Radiating Efficiency: 29.83% @0.85500 GHz



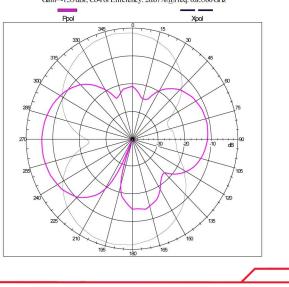
Far-field Pattern @ Phi=0 deg(E-Theta Plane-Cut) Gain=-1.33 dBi; Co-Pol Efficiency: 26.67%@Freq: 0.85500 GHz



Far-field Pattern @ Phi=90 deg(E-Theta Plane-Cut) Gain=-1.33 dBi; Co-Pol Efficiency: 26.67%@Freq: 0.85500 GHz



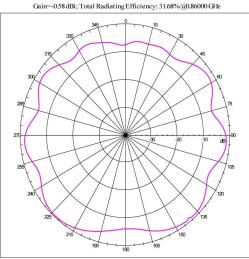
Far-field Pattern @ Theta=90 deg(E-Phi Plane-Cut) Gain=-1.33 dBi; Co-Pol Efficiency: 26.67%@Freq: 0.85500 GHz



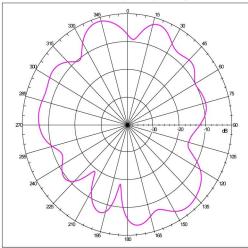
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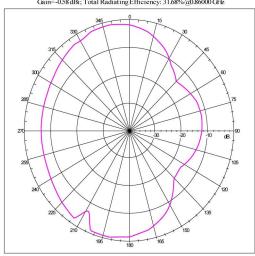
Far-field Power Distribution on X-Z Plane(E-Plane of L3 Pol Sense)

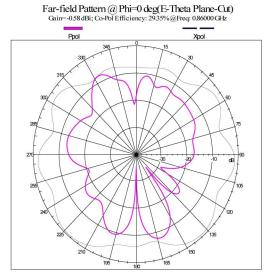


Far-field Power Distribution on Y-Z Plane(H-Plane of L3 Pol Sense) Gain=-0.58 dBi; Total Radiating Efficiency: 31.68%@0.86000 GHz

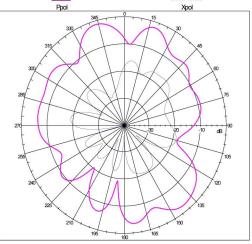


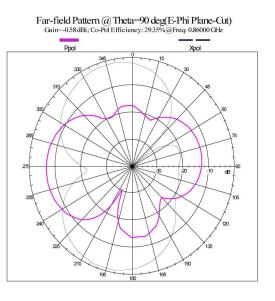
Far-field Power Distribution on X-Y Plane Gain=-0.58dBi; Total RadiatingEfficiency: 31.68%@0.86000 GHz





Far-field Pattern @ Phi=90 deg(E-Theta Plane-Cut) Gain=-0.58 dBi; Co-Pol Efficiency: 29.35%@Freq: 0.86000 GHz



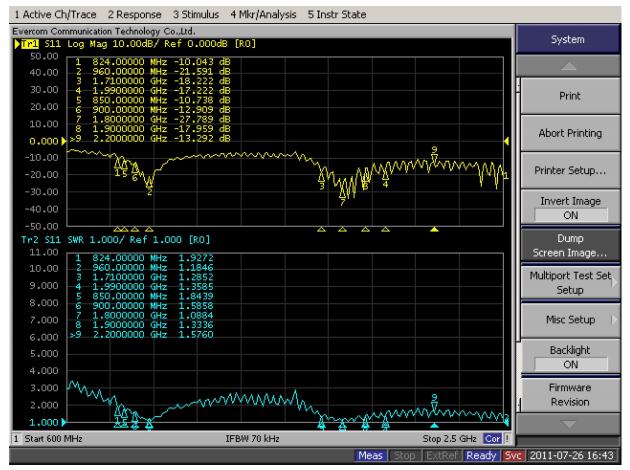


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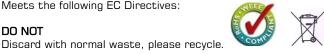
#### Performance Data : VSWR



#### **RF** Solutions Ltd. Recycling Notice

Meets the following EC Directives:

DO NOT



#### ROHS Directive 2011/65/EU and amendment 2015/863/EU

Specifies certain limits for hazardous substances.

#### WEEE Directive 2012/19/EU

Waste electrical & electronic equipment. This product must be disposed of through a licensed WEEE collection point. RF Solutions Ltd., fulfils its WEEE obligations by membership of an approved compliance scheme. Environment Agency Producer Registration Number: WEE/JB0104WV.

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#### Waste Batteries and Accumulators Directive 2006/66/EC

Where batteries are fitted, before recycling the product, the batteries must be removed and disposed of at a licensed collection point.

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