

RFCCOM

ShenZhenShi BeiGuangLianHe Technology Co. Ltd.

Profile Series
DA28-TB80I

RFCCOM Embedded Antenna

Preliminary Engineering Data Sheet



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*CREATE
VALUE FOR
CUSTOMERS*



Revision history

Revision	Date	Note
110-07-01-001-1 Rev.	2020-07-03	Initial Draft
110-07-01-001-2 Rev.	2023-03-30	Modify the dimension
110-07-01-001-3 Rev.	2023-05-06	Update Radiation Patterns
110-07-01-001-4 Rev.	2023-08-09	Update Radiation Patterns
110-07-01-001-5 Rev.	2023-08-09	Modify the cover

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1、 Descriptions

This embedded antenna is designed for 2.4GHz Band. Both of wireless Lan IEEE 802.11b/g/n ,Bluetooth and Zigbee .This Antenna provides a high efficiency and a good performance.

2、 Features

The DA28-TB80I Embedded Antenna is defined by the following features:

- IEEE 802.11 b/g/n standards
- 2.43 dBi peak gain at 2.4 GHz
- 3.06 dBi peak gain at 2.45 GHz
- 3.27 dBi peak gain at 2.5 GHz
- Cable route and Case mount
- Easy integration

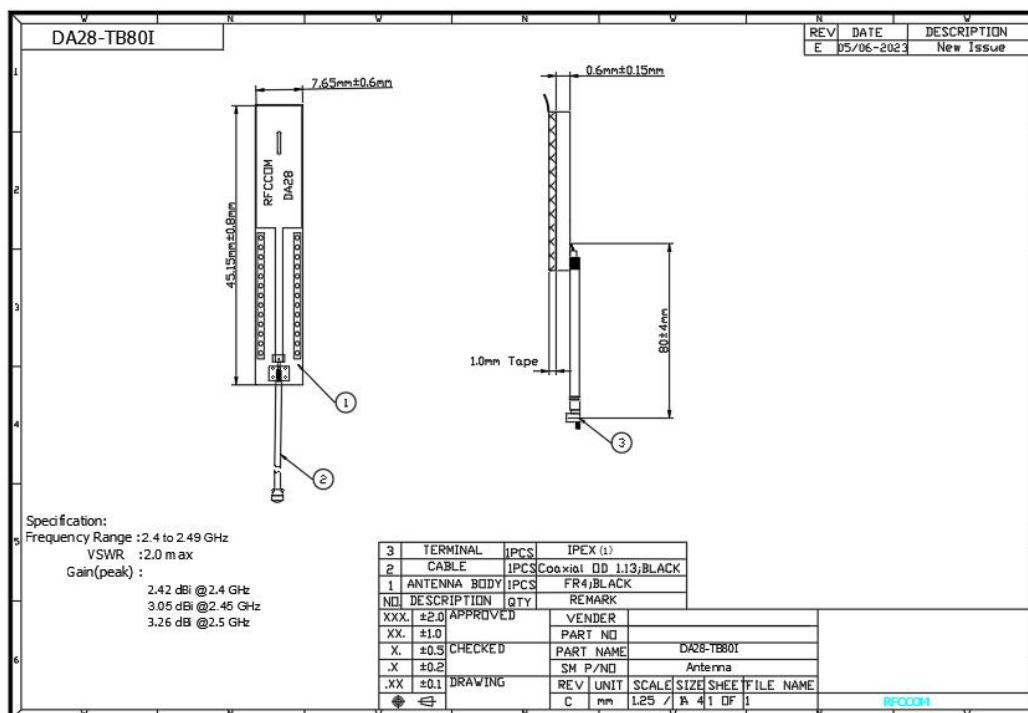
3、 Applications

- Wireless LAN
- ISM band 2.4GHz wireless applications
- Bluetooth
- Zigbee

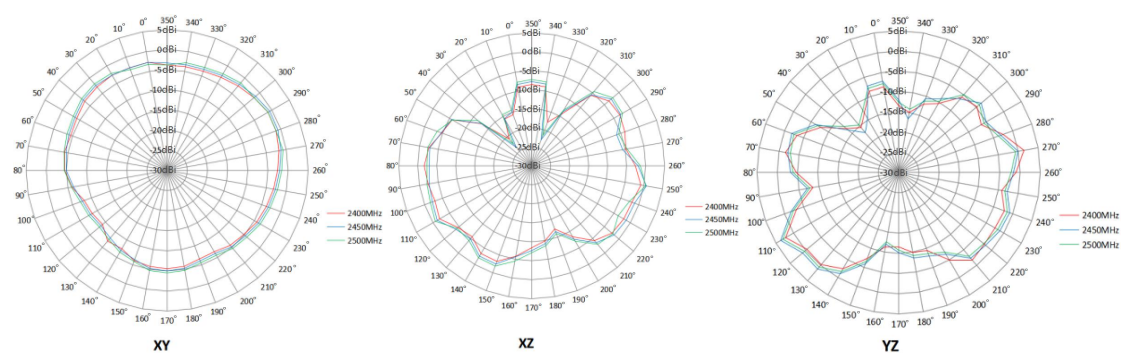
4、Electrical Specifications

Standard	IEEE 802.11n and 802.11 b/g
Frequency range	2.4 to 2.49GHz
Peak gain	2.43 dBi peak gain at 2.4 GHz 3.06 dBi peak gain at 2.45 GHz 3.27 dBi peak gain at 2.5 GHz
VSWR	2:1
Feed impedance	50 ohms
Power handling	30 dBm
Interface	50 ohms, 1.13 mm diameter, micro coax cable (available with optional U.FL-compatible cable connector and/or cable-mounted EMI ferrites)
Antenna dimensions	45.15 x 7.65 x 0.6mm (L x W x H)
Temperature range	Operating: -40° C to +75° C (-40° F to +167° F) Storage: -40° C to +85° C (-40° F to +185° F)
Humidity range	0% to 95% non-condensing

5、Dimensions



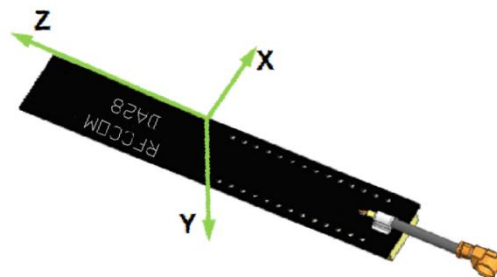
6、Radiation Patterns



XY	Frequency (GHz)	Max	Min	Avg
		Peak gain (dBi)		
	2.4	-1.073872975	-9.066236121	-4.501273889
	2.45	-0.579309451	-8.569679138	-4.182433405
	2.5	-0.825974259	-8.061314381	-3.84907885

XZ	Frequency (GHz)	Max	Min	Avg
		Peak gain (dBi)		
	2.4	-0.886636441	-20.87734656	-6.792343705
	2.45	0.672480247	-23.17590765	-6.555685425
	2.5	0.551746439	-22.54037936	-6.168955672

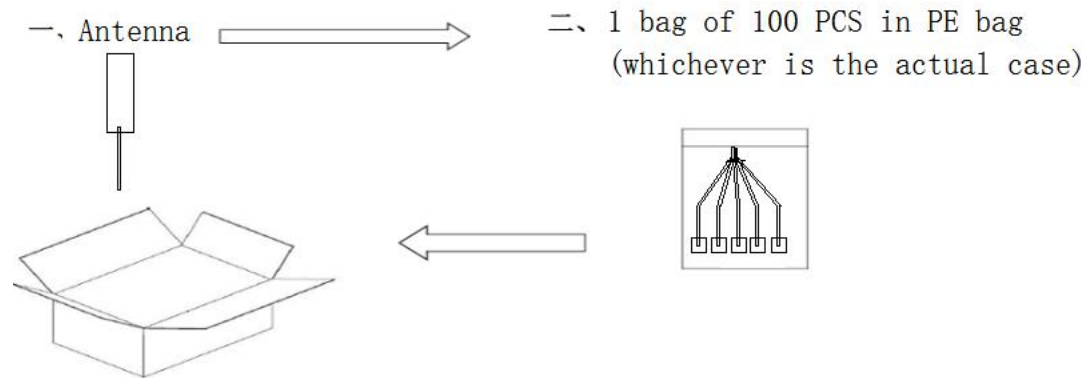
YZ	Frequency (GHz)	Max	Min	Avg
		Peak gain (dBi)		
	2.4	2.428329995	-15.53449582	-6.276446093
	2.45	3.055678655	-14.73879729	-5.950320404
	2.5	3.266915456	-17.13862039	-5.722424427



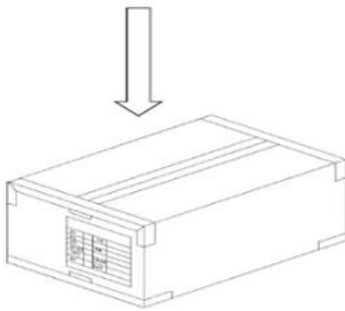
7、Cable Datasheet

Structure characteristics				
Structure	Item		Standard value	
①Inner conductor	Material		Tinned copper wire	
	Makeup:total / O.D. of every wire(mm)		7/0.08	
	(Intertwist)NOM. O.D. (mm)		0.24±0.02	
②Insulation	Material		FEP	
	Color		Clarity	
	NOM. O.D. (mm)		0.7±0.03	
③Outer conductor	Material		Tinned copper wire	
	Makeup:total / O.D. of every wire(mm)		4/0.05	
	NOM. O.D. (mm)		0.92±0.05	
	Coverage ratio(%)		90±5	
④Jacket	Material		FEP	
	Color		Black	
	NOM. O.D. (mm)		1.13±0.05	
Electrical characteristics				
Item	Standard value	Item	Frequency	Standard value Unit:dB/m
Capacitance (pF/m)	98	Attenuation	1GHz	≤2.2
Velocity (%)	70		2GHz	≤3.1
Impedance (Ω)	50±2		3GHz	≤3.8
Standing wave ratio	≤1.3@0~6GHz		4GHz	≤4.4
Max.operating voltage (V)	1000		5GHz	≤4.9
Max.operating frequency (GHz)	6		6GHz	≤5.4
Dependability				
Item		Unit	Standard value	
Min.bending radius static		mm	4	
Operating temperature		℃	-55~+150	

8、Packaging



三、One case of 100pcs of finished products
(subject to actual packaging)



四、Seal the box, paste the production label