
SNCA31-2500M-S2TF

Datasheet

Jiangsu Unique Advanced Materials Co., Ltd.

ADDR: 15-3, Area A, No. 15 Hanjiang Road, Xinwu District, Wuxi City, Jiangsu Province

Specification of SNCA31-2500M-S2TF Antenna

Customer/Project	SNCA31-2500M-S2TF Antenna				
SCT P/N			Version	A1	
Date					
Checked by	RF		Design by	RF	
	ME			ME	
			Remark		
Customer					
Date					
Confirmed by	RF				
	ME				
Remark					

1.Features

- Compact size
- Omni-directional Radiation
- Tape & reel automatic mounting
- Reflow process compatible
- RoHS compliant

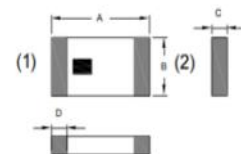
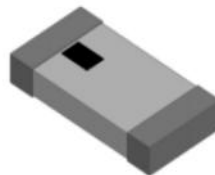
2.Applications

- 2.4GHz wireless communications
- Bluetooth gadget
- Zigbee device
- ISM band equipment

Specifications

DESCRIPTION	VALUE
Centre Frequency	2.545G
Bandwidth	100MHz (TYP)
Return Loss	10dB min
Polarization	Linear
Azimuth Beamwidth	Omni-directional
Input Impedance	50 Ω
V.S.W.R (in BW)	≤ 2.0
Operating Temperature	-40°C~85°C

Dimensions

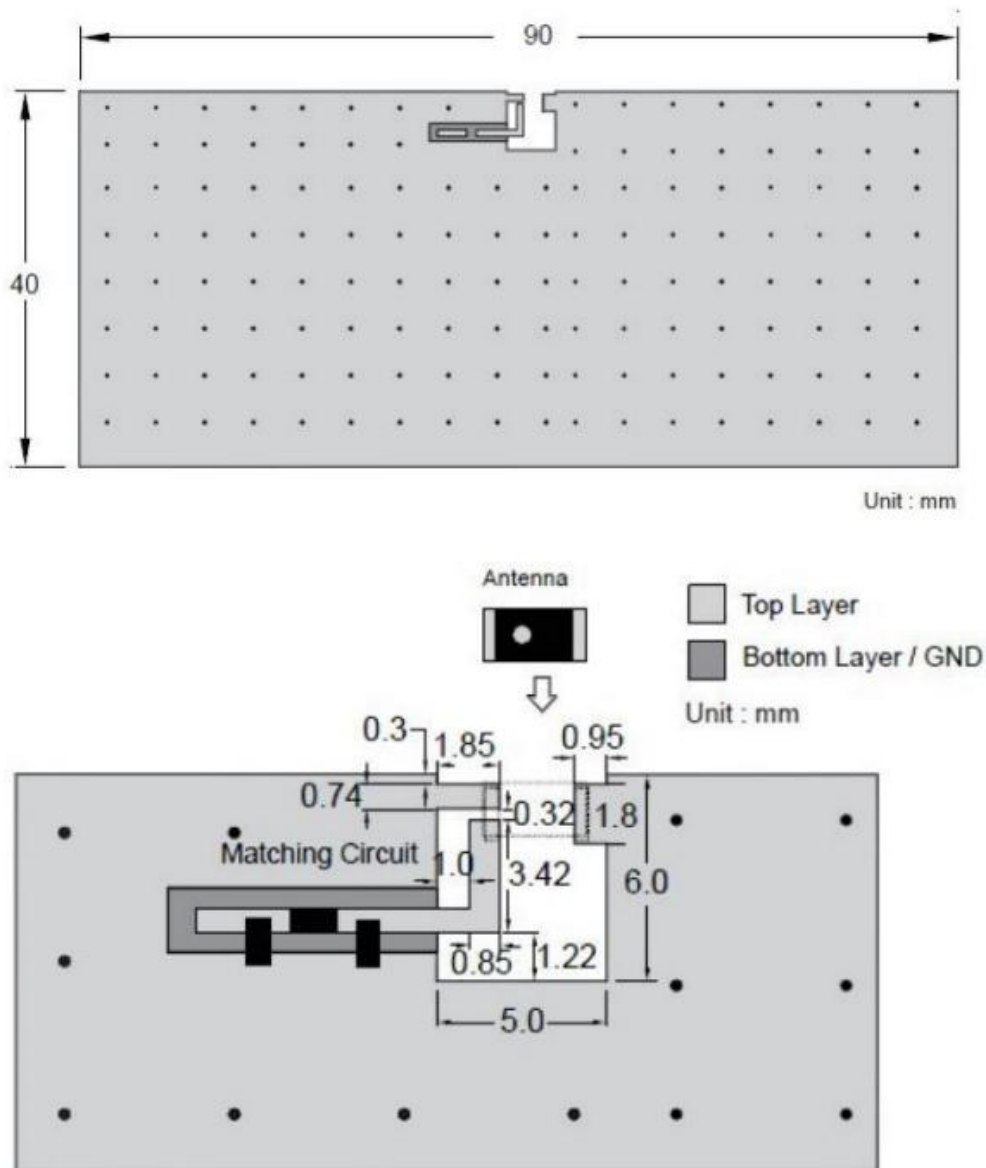


Item	A	B	C	D
SNCA31	3.05 $\pm$ 0.10	1.55 $\pm$ 0.10	0.55 $\pm$ 0.10	0.40 $\pm$ 0.10

3.Pin configuration

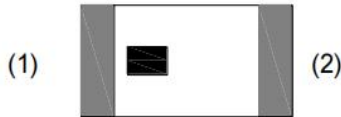
S1	Feeding Point
S2	GND

4. Reference design of evaluation board



SNCA31-2500M-S2TF

1) Terminal Configuration:



No.	Terminal Name	No.	Terminal Name
(1)	Feeding Point	(2)	Soldering terminal

5. Test and Measurement Procedures

5.1 Test Conditions

Unless otherwise specified, the standard atmospheric conditions for measurement/test as:

- Ambient Temperature: $20 \pm 15^{\circ}\text{C}$
- Relative Humidity: $65 \pm 20\%$
- Air Pressure: 86 Pa to 106KPa

If any doubt on the results, measurements/tests should be made within the following limits:

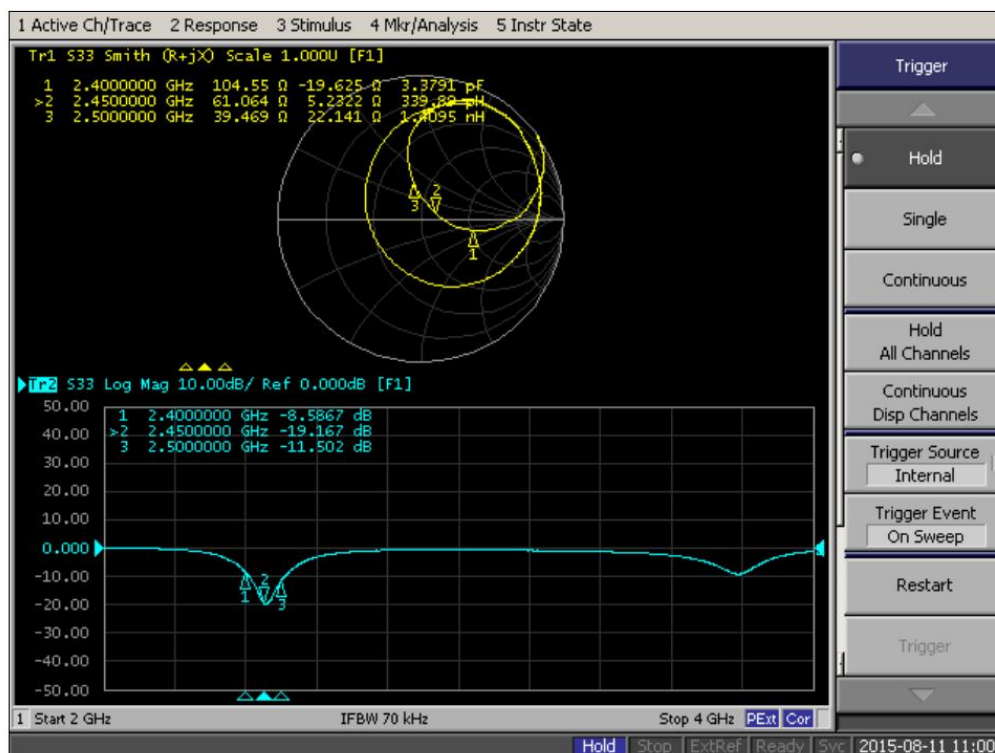
- Ambient Temperature: $20 \pm 2^{\circ}\text{C}$
- Relative Humidity: $65 \pm 5\%$
- Air Pressure: 86KPa to 106KPa

5.2 Visual Examination

- Inspection Equipment: 20 X magnifier

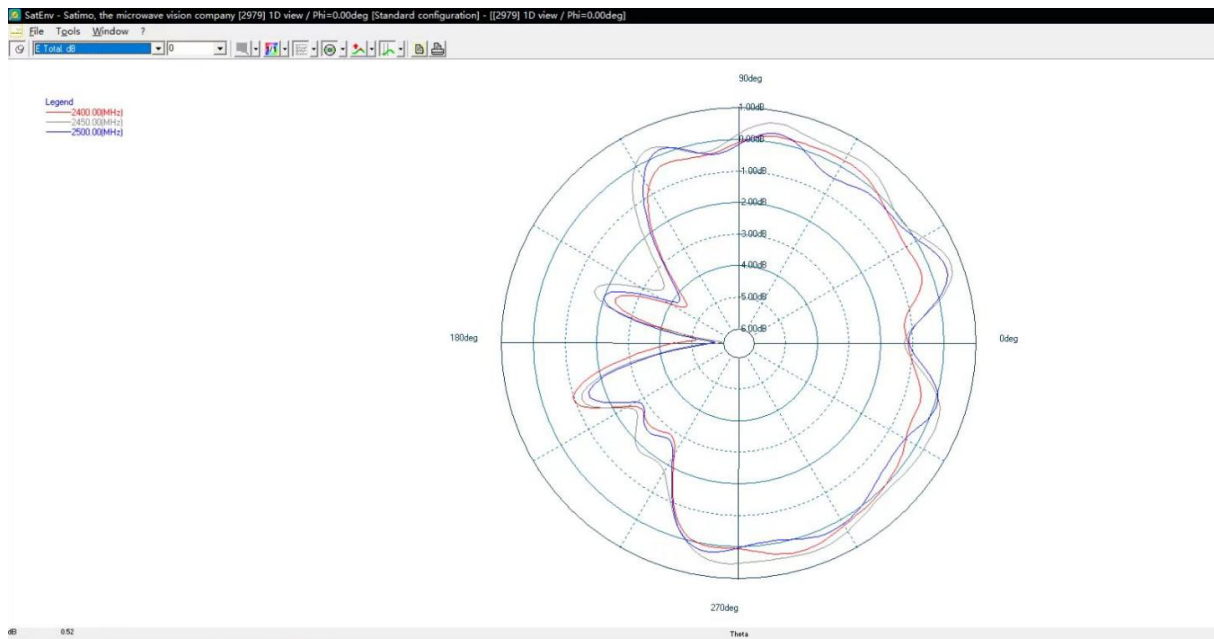
6. Typical Electrical Characteristics

6.1 Characteristic curve

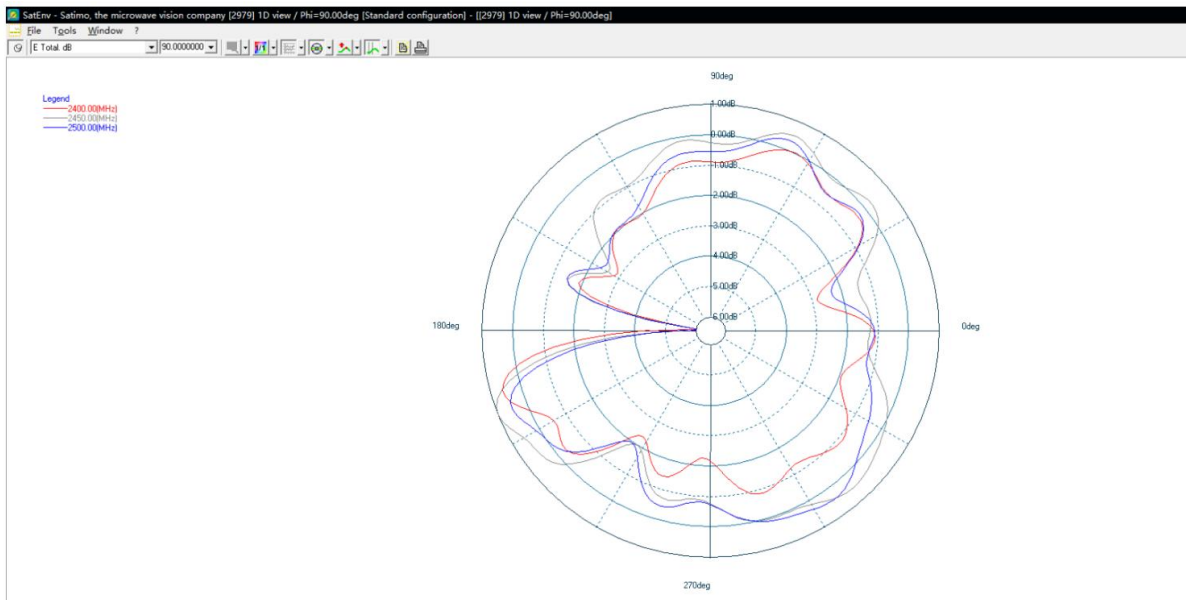


6.2 Radiation pattern

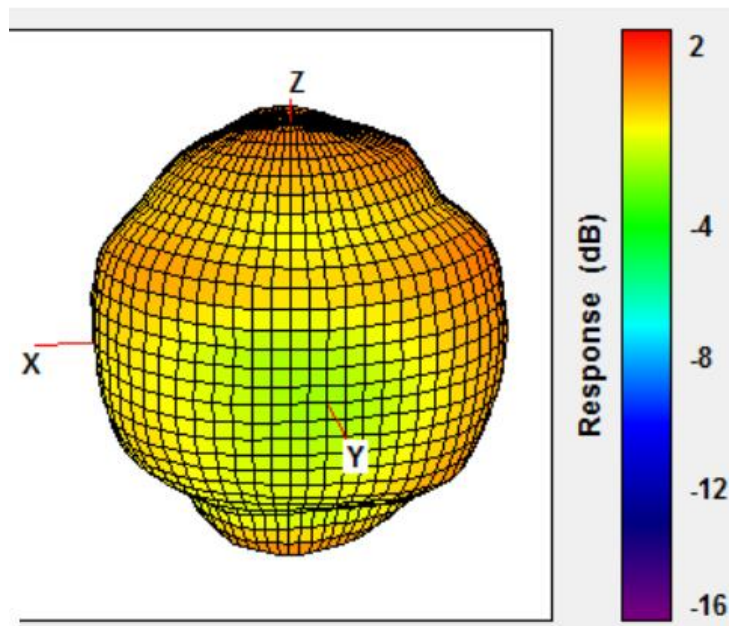
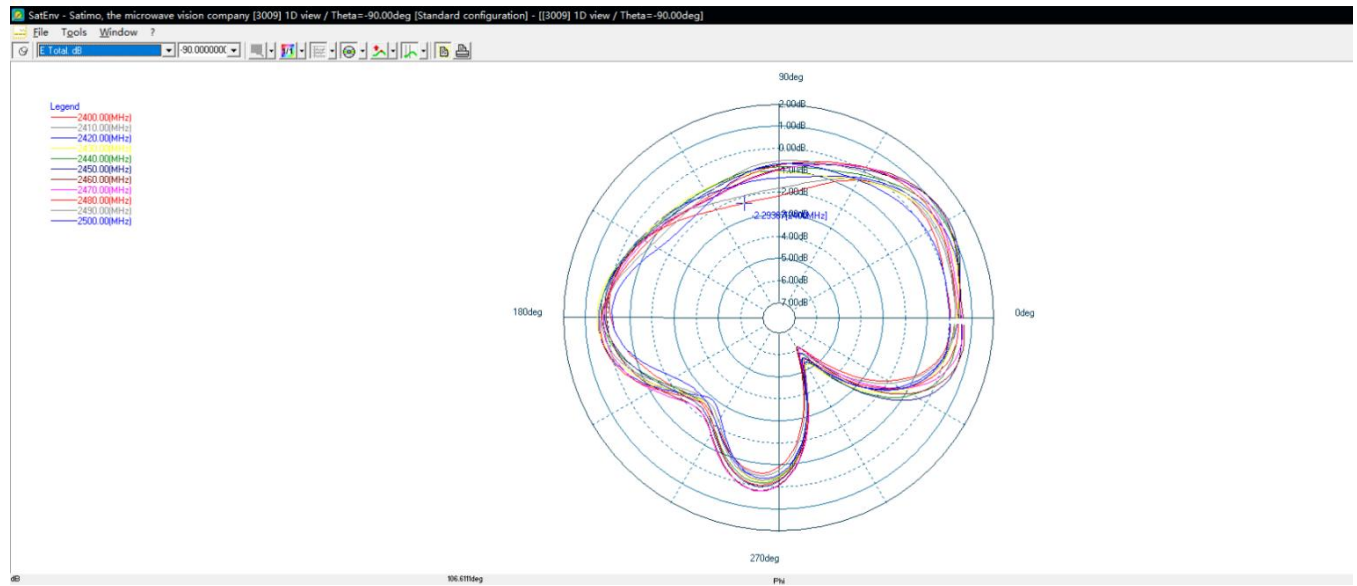
X-Z Plane



X-Y Plane



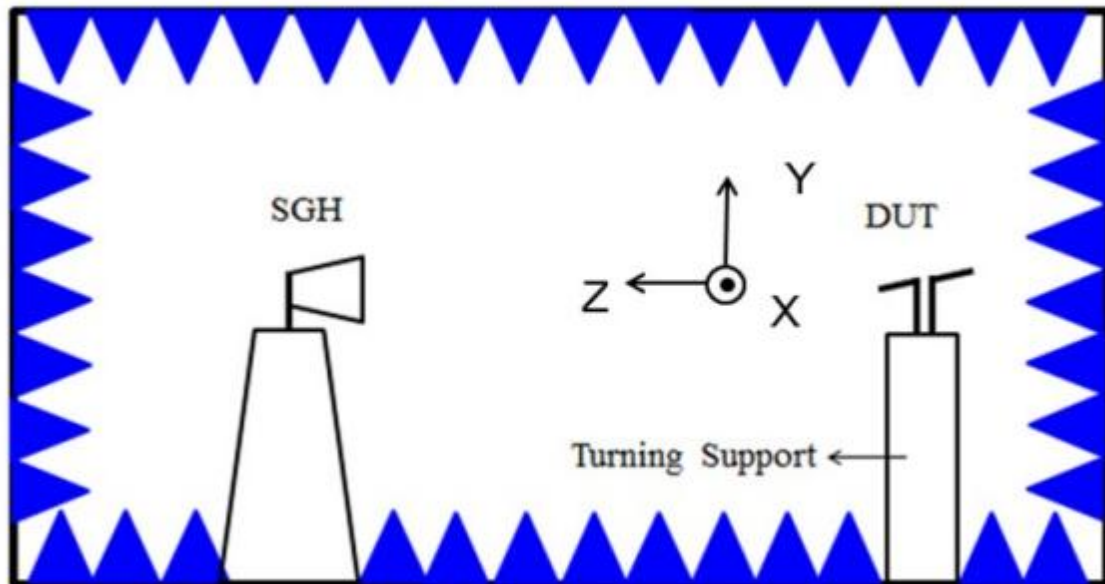
Y-Z Plane



6.3 Efficiency table:

	Efficiency	Peak Gain
2400MHz	71.8%	0.25dBi
2450Mhz	74.5%	1.20dBi
2500MHz	72.6%	0.33dBi

6.4 Chamber Coordinate System



6.5 Soldering and Mounting

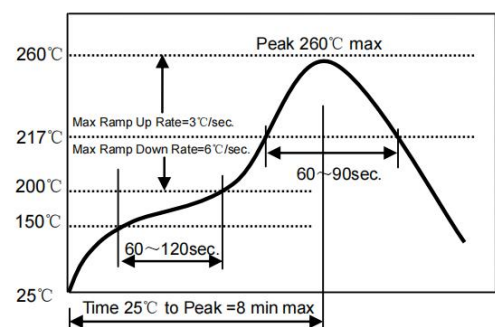
Mildly activated rosin fluxes are preferred. The minimum amount of solder can lead to damage from the stresses caused by the difference in coefficients of expansion between solder, chip and substrate. The terminations are suitable for all wave and re-flow soldering systems. If hand soldering cannot be avoided, the preferred technique is the utilization of hot air soldering tools.

7. Recommended Soldering Technologies

7.1 Reflow Profile

- △ Preheat condition: 150 ~200°C/60~120sec.
- △ Allowed time above 217°C: 60~90sec.
- △ Max temp: 260°C
- △ Max time at max temp: 10sec.
- △ Solder paste: Sn/3.0Ag/0.5Cu
- △ Allowed Reflow time: 2x max

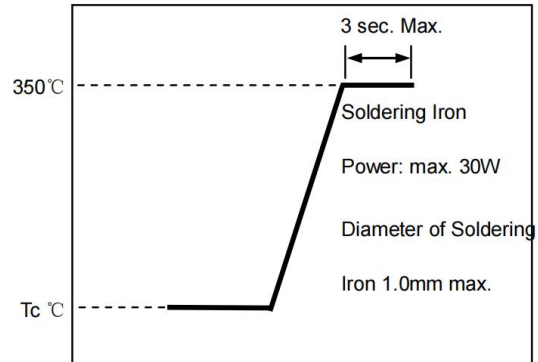
[Note: The reflow profile in the above table is only for qualification and is not meant to specify board assembly profiles. Actual board assembly profiles must be based on the customer's specific board design, solder paste and process, and should not exceed the parameters as the Reflow profile shows.]



7.2 Iron Soldering Profile

- △ Iron soldering power: Max.30W
- △ Pre-heating: 150 °C / 60 sec.
- △ Soldering tip temperature: 350°C Max.
- △ Soldering time: 3 sec Max.
- △ Solder paste: Sn/3.0Ag/0.5Cu
- △ Max.1 times for iron soldering

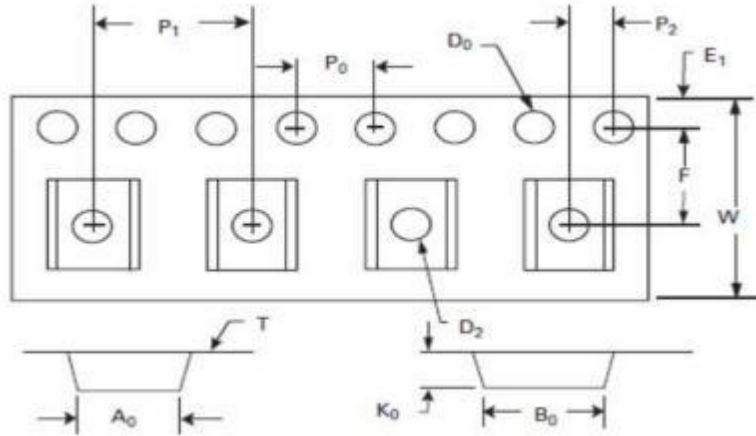
[Note: Take care not to apply the tip of the soldering iron to the terminal electrodes.]



SNCA31-2500M-S2TF

8. Packaging Information

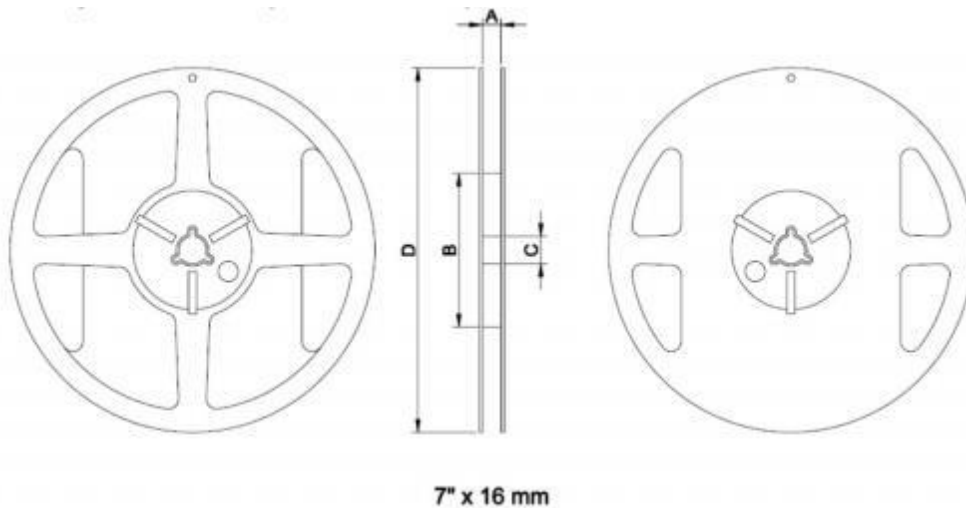
8.1 Tape Specification:



W	F	E1	D0	D1	P0	P1	A0
12+0.2-0.3	4+/-0.05	1.75+/-0.10	1.55+/-0.05	1.00	4.00+/-0.10	4.00+/-0.10	1.95+/-0.10

B0	T	K0
3.65+/-0.10	0.25+/-0.10	0.87+/-0.1

8.2 Reel Specification: (7", Φ180 mm)



Tape Width(mm)	A(mm)	B(mm)	C(mm)	D(mm)	Chip/Reel(pcs)
16	16±1.0	60±2	13.5±0.5	178±2	3000