

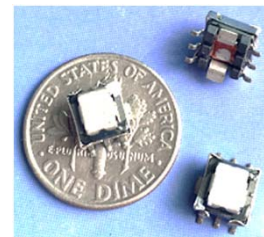


TREE0502ABQ Series



1. Features of TREE0502ABQ Series:

- Small size low profile SMD current sense transformer with full selection of turn ratios.
- Primarily rated for 20.0A AC rms.
- Inductance range from 80.0uH to 3.0mH. Custom values are welcomed.
- 8.38 x 7.21 mm Max. Foot Print with 5.30 mm Max. height.
- Hi-Pot rating of 500.0 Vrms.
- Ideal for current sense feedback control, Load drop sensing and high density DC to DC converter.
- Tape & Reel Quantity: 900 pieces per 13 inches reel.
- RoHS and HF compliant.

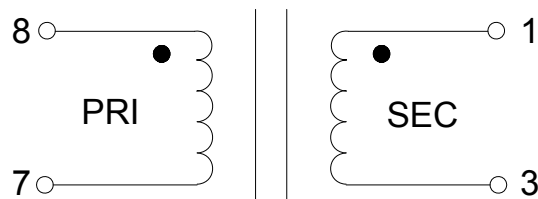


2. Electrical Characteristics of TREE0502ABQ Series:

ITG Part Number	DCR (mΩ Max.)		Inductance @ 100KHz (Min.)	Marking Color	Turns Ratio
	Primary (8-7)	Secondary (1-3)			
TREE0502ABQ021HF	0.75	0.55	80.00 μH	Pink	1:20
TREE0502ABQ022HF	0.75	0.87	180.00 μH	Green	1:30
TREE0502ABQ023HF	0.75	1.14	320.00 μH	Golden	1:40
TREE0502ABQ024HF	0.75	1.50	500.00 μH	Blue	1:50
TREE0502ABQ025HF	0.75	1.75	0.72 mH	Black	1:60
TREE0502ABQ026HF	0.75	4.75	0.98 mH	White	1:70
TREE0502ABQ027HF	0.75	5.50	2.00 mH	Silver	1:100
TREE0502ABQ028HF	0.75	6.50	3.00 mH	Red	1:125

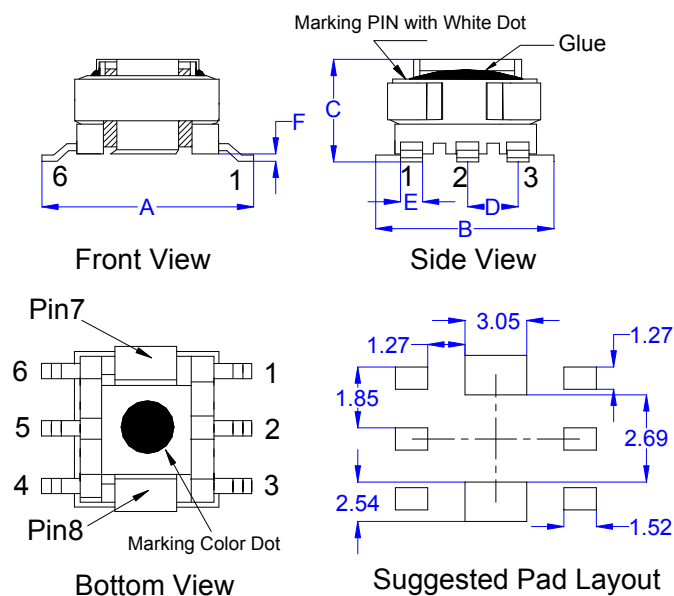
3. Mechanical Dimension of TREE0502ABQ Series:

A	B	C	D	E	F
Max.	Max.	± 0.30	± 0.20	Ref.	Ref.
8.38	7.21	5.00	1.85	0.60	0.25



● Winding Start

SCHEMATIC DIAGRAM



● New York 1 914 347 2474 ● Taipei 886 2 2698 8669 ● Kaohsiung 886 7 350 2275
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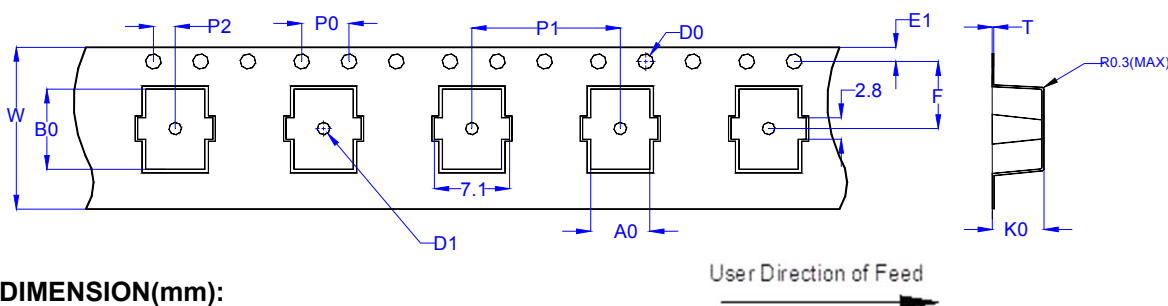


TREE0502ABQ Series



1.PACKAGE SPECIFICATION.(UNIT:mm):

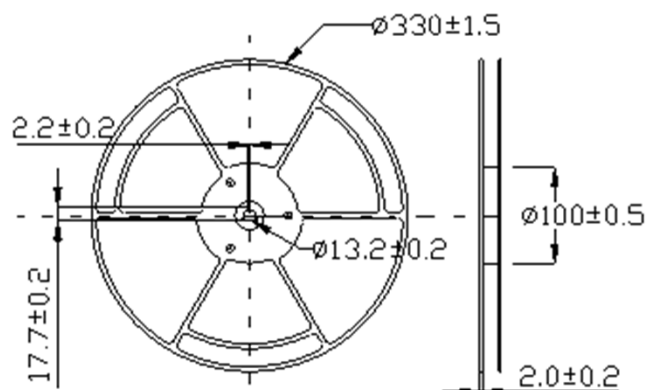
(1).ENCAPSOLATION MODE:



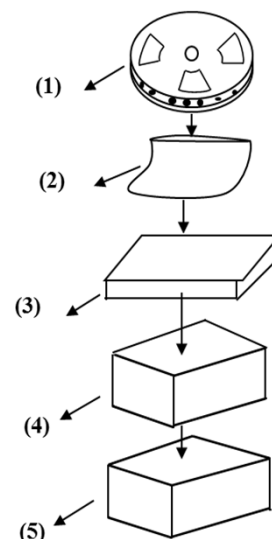
(2).DIMENSION(mm):

W	A0	B0	K0	P0	P1	P2	D0	D1	E1	F	T
16.0+0.30/-0.10	6.2±0.10	8.4±0.10	5.80±0.10	4.00±0.10	12.0±0.10	2.00±0.10	1.5+0.10/-0	1.5+0.10/-0	1.75±0.10	11.5±0.10	0.40±0.05

(3).REEL SIZE:



(4).PACKAGE MODE:



(5).PACKAGING LIST:

No.	Packing Part	Dimension (mm)	Material	Quantity
1	Reel	330	Plastic	900Pcs/Reel
2	Bag	450x360x0.075	Plastic	1Reel/Bag
3	Small Box	340X335X45	Paper	2Bag/Small Box
4	Middle Box	356X350X226	Paper	4Small Boxes/Middle Box
5	Outer Box	378X362X252	Paper	1Middle Box/Outer Box

(6).WEIGHT: N.W: 0.20g/pcs TOTAL 1.44Kg(APPROX),G.W:TOTAL 2.44Kg (APPROX).

(7).Storage conditions: -40°C~85°C ,75%RH (Max.).

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1.RELIABILITY TEST:

TEST ITEMS	SPECIFICATIONS	TEST METHOD AND REMARKS
Solder ability	The electrodes shall be at least 90% covered with new solder coating	According to IEC68-2-20. 1. Soldering temperature: $245 \pm 5^{\circ}\text{C}$ 2. Solder: 99.3Sn/0.7Cu 3. Flux: Rosin 4. Immersion time: $5 \pm 1\text{Sec}$
Soldering heat resistance	1. Appearance :no damage 2. Inductance change: within $\pm 10\%$ of initial value	1. Preheat temperature 150°C . 2. Preheat time: 1min 3. Solder temperature $260 \pm 5^{\circ}\text{C}$ 4. Dipping time: $10 \pm 1\text{Sec}$ 5. Measured at room temperature after placing for 24hours
Vibration(OUT LAB)	1. Appearance: no damage 2. All Electrical and mechanical parameters within tolerance	According to MIL-STD-202G Method 201A. 1. Frequency: 10 to 55Hz. 2. Amplitude: 1.52mm 3. Direction and time X Y and Z Direction for 2 hours each
Humidity resistance test	1. Appearance: no damage 2. All Electrical and mechanical parameters within tolerance	According to IEC68-2-1 Method Ca: 1. Temp: $40 \pm 2^{\circ}\text{C}$ 2. Humidity: 90%-95%RH 3. Test time: $500 \pm 2\text{H}$ 4. The component should be stabilized at normal condition for 24 Hours before test
High temperature resistance test	1. Appearance: no damage 2. All Electrical and mechanical parameters within tolerance	According to IEC68-2-2. 1. 1. Temperature: $85 \pm 3^{\circ}\text{C}$ 2. Test time: 500+24H 3. The component should be stabilized at normal condition for 24hours before test
Low Temperature resistance test	1. Appearance: no damage 2. All Electrical and mechanical parameters within tolerance	According to IEC68-2-1 Method A(Ad). 1. Temperature: $-40 \pm 3^{\circ}\text{C}$ 2. Test time: 500+24H 3. The component should be stabilized at normal condition for 24hours before test
Temperature cycles test	1. Appearance: no damage 2. All Electrical and mechanical parameters within tolerance	According to IEC68-2-14 Method N(Nb). 1. High-temp: 85 ± 3 duration: 30min 2. room -temp: $25 \pm 2^{\circ}\text{C}$ Duration 3H 3. Low-temp: -40 ± 3 Duration 30min 4. room-temp: $25 \pm 2^{\circ}\text{C}$ Duration 3H 5. Number of cycle: 10cycles 6. The component should be stabilized at normal condition for 24hours before test

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Soldering Reflow Chart

Stage	Precaution	Recommended temperature profile
Reflow soldering	Temperature profile can be referenced after confirming of adhesion , temperature of resistance to soldering heat , component size , soldering etc. sufficient . Note: please refer to the latest IPC/JEDEC J-STD-020: "Moisture/Reflow Sensitivity Classification for Nonhermetic Solid State Surface Mount Devices"	Temperature °C 250 240 220 125 25 10S (MAX) 60s to 80s Natural cooling 170s to 210s 300s to 480s

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