

978 MHz SMD TC-SAW Filter

AFII-TC-0015

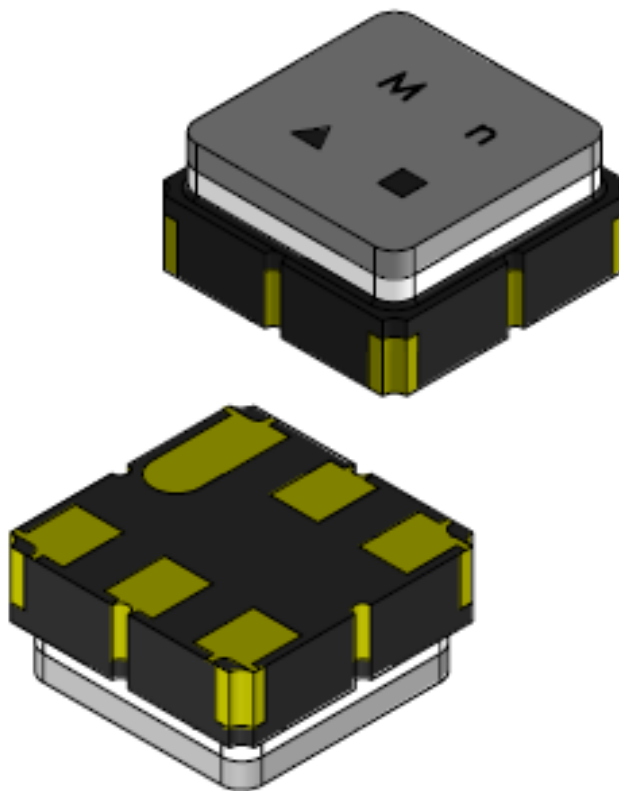
Features

- Temperature-compensated
- Bandpass TC-SAW Filter with 5 MHz bandwidth
- Surface Mount 3 x 3 x 1.4 mm package
- Excellent selectivity with high out-of-band rejection

Applications

- Internet of Things (IoT)
- 5G
- Artificial Intelligence (AI)
- Augmented reality
- Autonomous vehicles
- Smart Home devices

Product Image



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Electrical Specification

Parameters	Minimum	Typical	Maximum	Units	Notes
Center Frequency (fc)	-	978	-	MHz	
Max. Insertion Loss	-	2	3.5	dB	975.5~980.5 MHz
Amplitude Ripple	-	0.5	0.8	dB	975.5~980.5MHz
Attenuation (Refer to 0 dB)	45	48	-	dB	fc - 20 MHz
	38	42	-	dB	fc - 15 MHz
	35	38	-	dB	fc + 15 MHz
	55	65	-	dB	fc + 20 MHz
VSWR	-	1.3	1.8	-	975.5~980.5MHz
DC Voltage	-	-	3	V	
Input Power	-	-	20	dBm	
Terminating Source Impedance	-	50	-	Ω	
Terminating Load Impedance	-	50	-	Ω	
Temperature Coefficient	-	-20	-	ppm/°C	

Notes: Temperature range for specification : -54°C ~ +85°C

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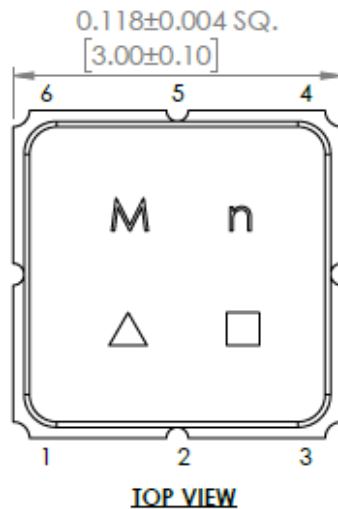
Mechanical Specification

Parameters	Specifications
Dimension	3 x 3 x 1.4 mm
Mounting Type	SMD Mount

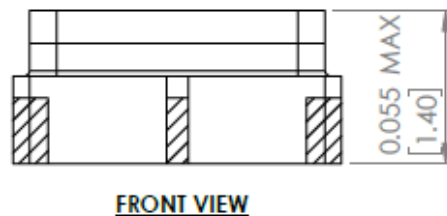
Environmental Specification

Parameters	Specifications
Operating Temperature Range	-54°C ~ +85°C
Storage Temperature Range	-60°C ~ +95°C
MSL level	1
ESD Machine Mode	100V
ESD Human Body Mode	200V

Product Dimensions



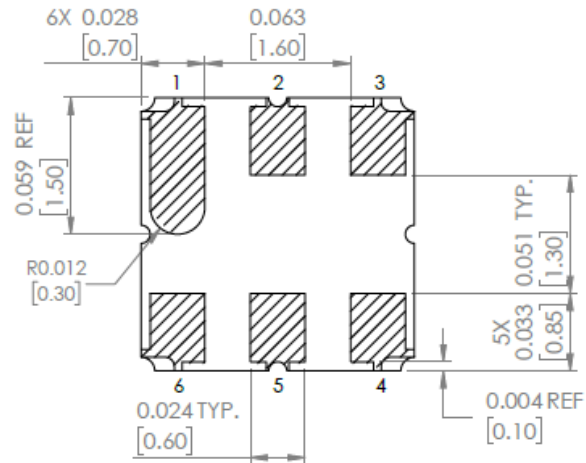
Pin No.	Function
1	Ground
2	Input
3	GND
4	GND
5	Out
6	GND



Dimensions: inches[mm]

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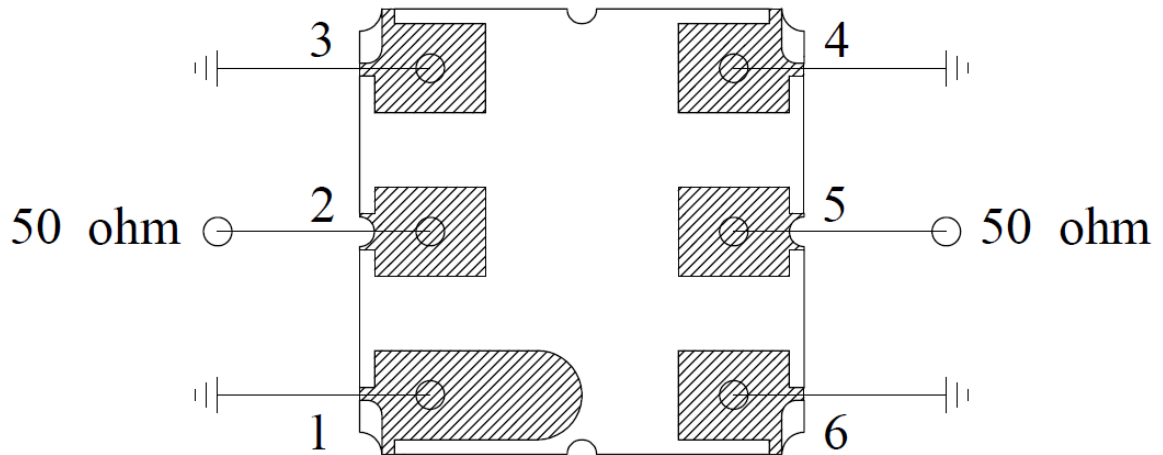


NOT SPECIFIED TOLERANCE: ± 0.005 [0.15]

BOTTOM VIEW

Dimensions: inches[mm]

Measurement Circuit



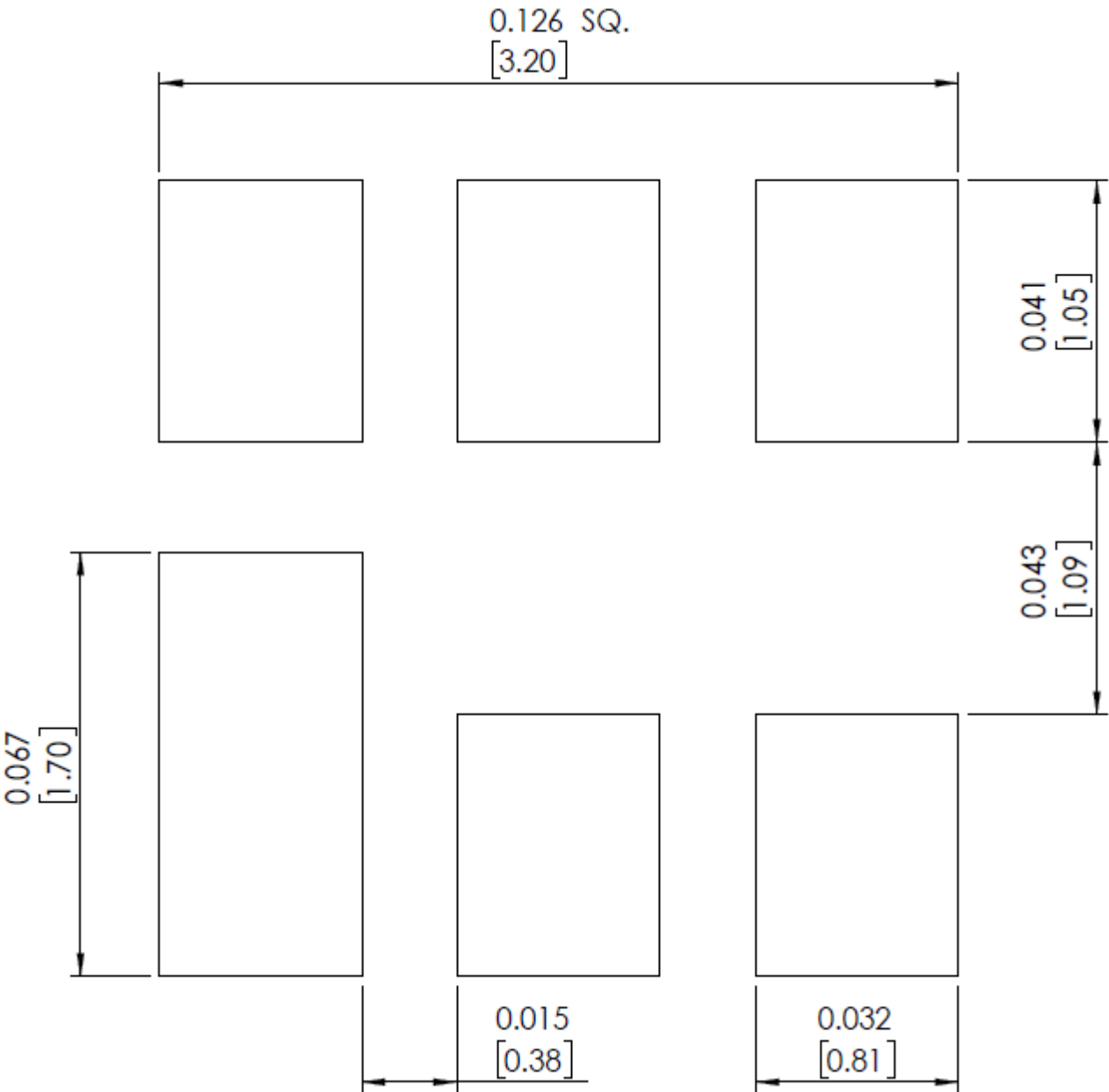
Source Impedance: 50 Ω

Load Impedance: 50 Ω

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PCB Footprint

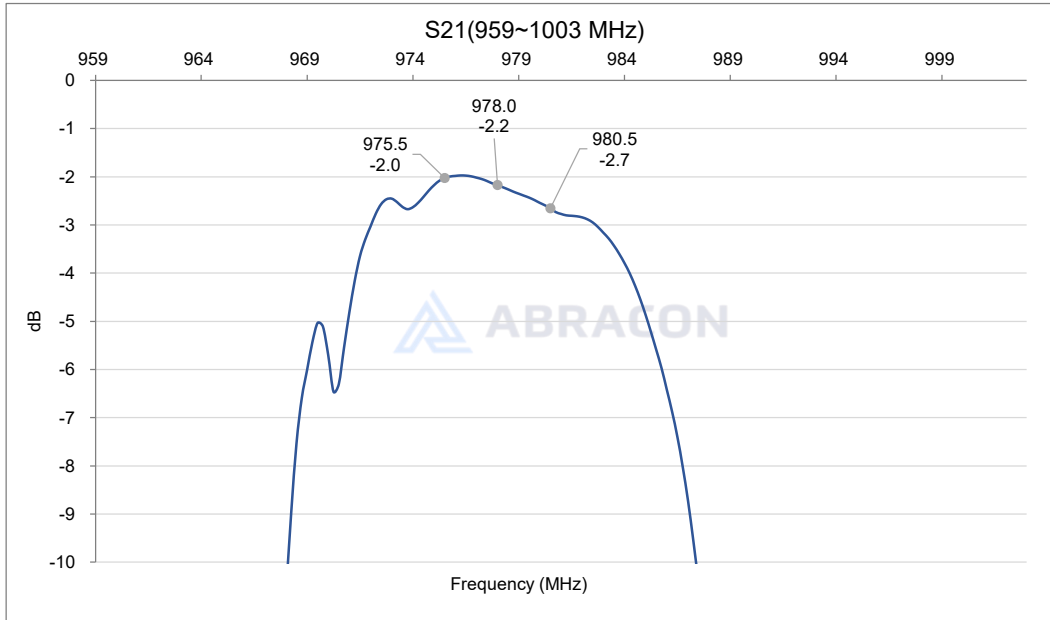


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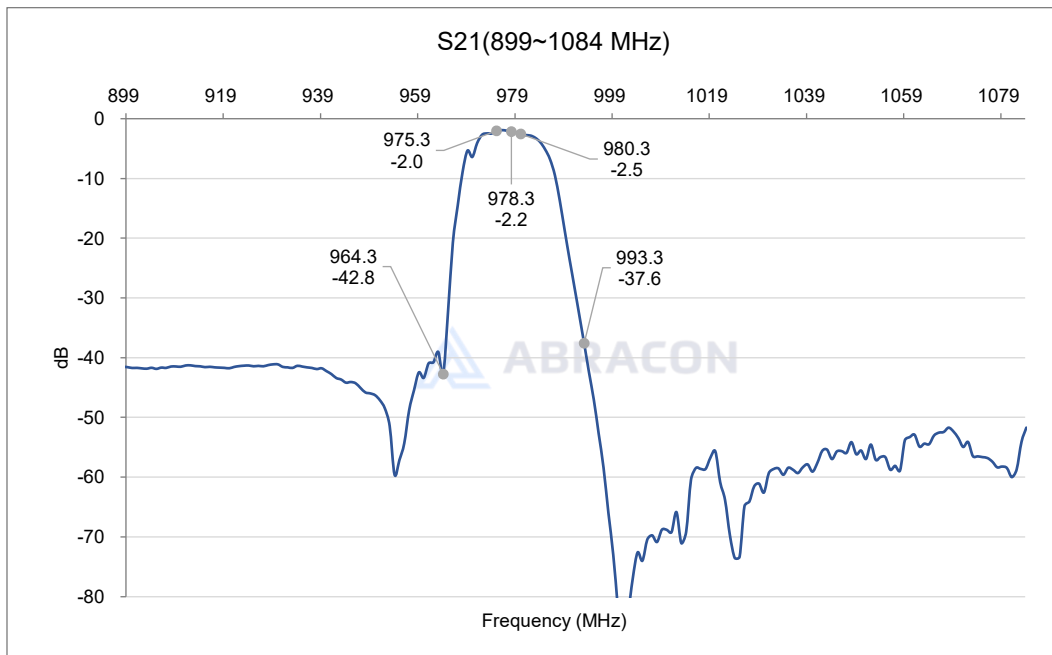
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Frequency Characteristics

S21 Narrow Band



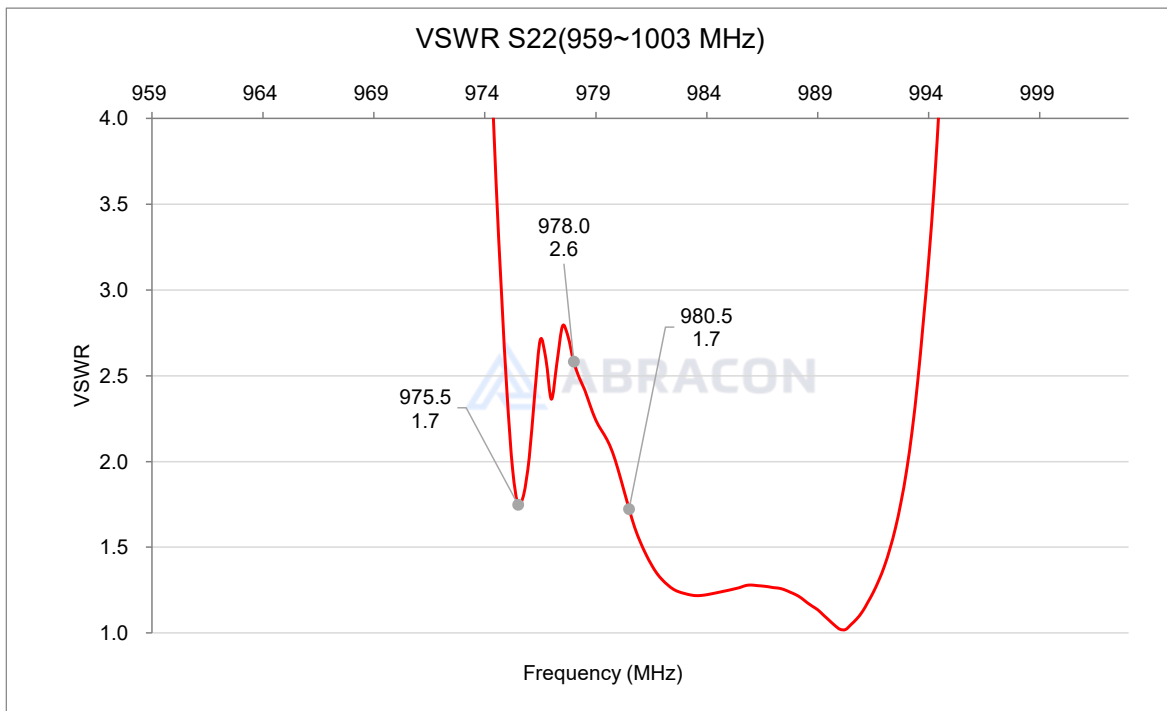
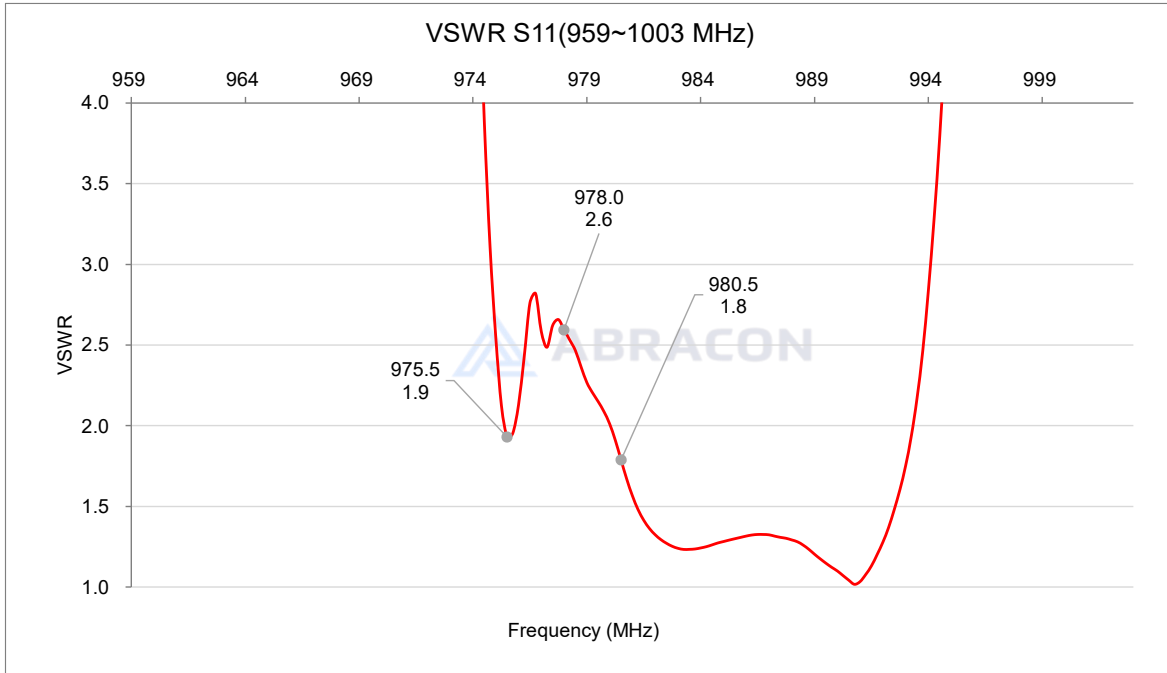
S21 Wide Band



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VSWR (S11 & S22)

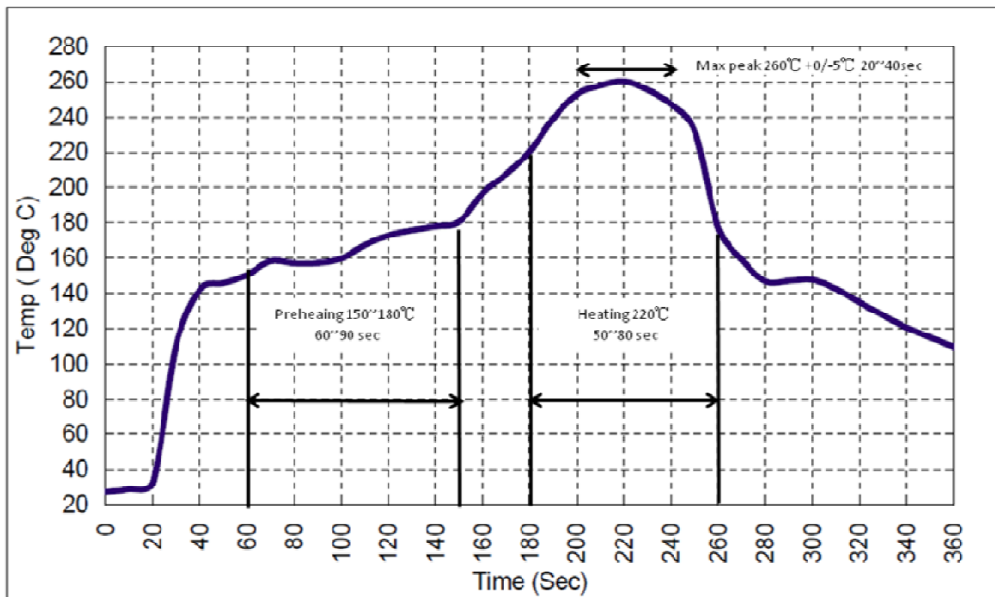


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Reflow Profile [JEDEC J-STD-020]

1. Preheating shall be fixed at 150°C ~ +180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 245°C ~ 260°C peak (min. 10sec).
4. Time :2 times.



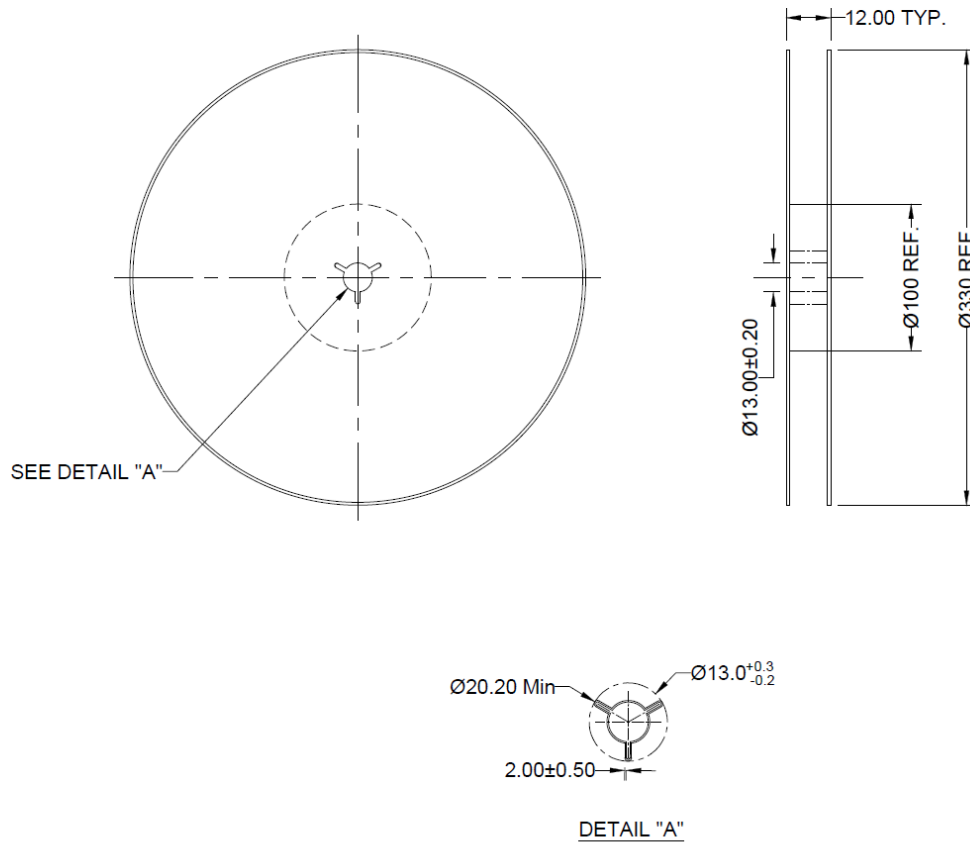
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Packaging

Tape & Reel (3000 pcs / reel)

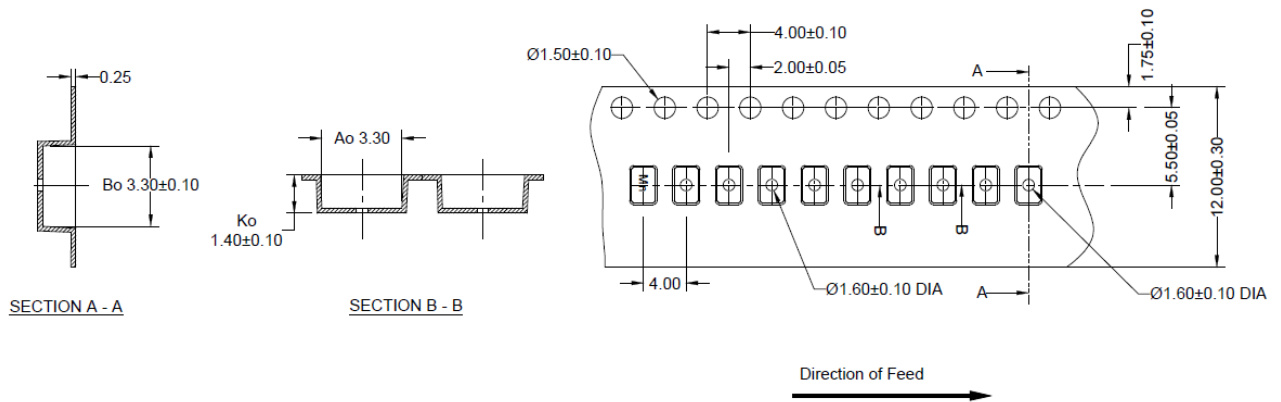
1. Reel Dimension



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2. Tape Dimension



Unit: mm

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