

5250MHz SMD SAW Filter



AFII-LW-0017

Request Samples



Check Inventory



1.8 x 1.4 x 0.65 mm
RoHS Compliant
MSL LEVEL=3

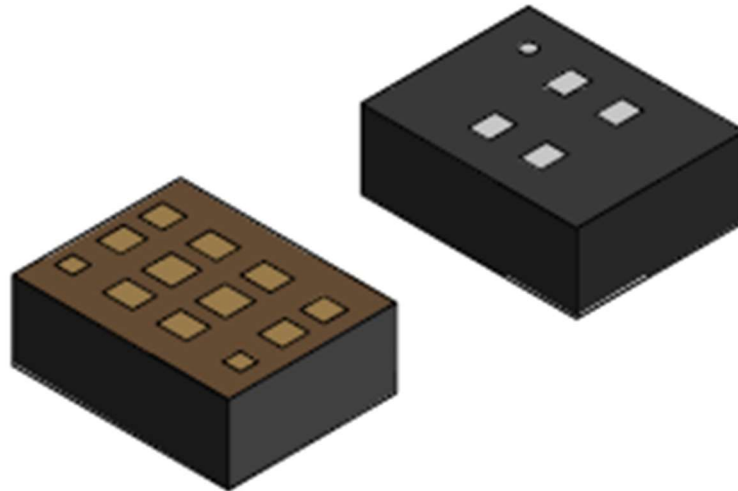
Features

- Bandpass SAW Filter with 160 MHz bandwidth
- Ultra-small Surface Mount 1.8 x 1.4 x 0.65 mm package
- Single-Ended Input and Output
- Excellent selectivity with high out-of-band rejection
- Ultra LAW (Lamb Acoustic Wave) technology

Applications

- Wireless Routers
- Residential Gateways
- Customer Premise Equipment
- Wi-Fi UNII1-2a indoor and outdoor use

Product Image



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Electrical Specification

Parameters	Minimum	Typical	Maximum	Units	Notes
Insertion Loss	-	2.0	2.6	dB	5170 - 5330MHz
Amplitude Ripple	-	-	0.8	dB	5170 - 5330MHz
Absolute Attenuation	30	37	-	dB	30 - 2400 MHz
	30	37	-		2400 - 2500 MHz
	30	34	-		2400 - 3000 MHz
	30	37	-		3400 - 3800 MHz
	30	37	-		3800 - 4900 MHz
	35	42	-		4400 - 4800 MHz
	20	28	-		4800 - 5000 MHz
	50	60	-		5490 - 5850 MHz
	20	24	-		7200 - 7500 MHz
	15	18	-		10300 - 11800 MHz
VSWR	-	1.48	1.7		5170 - 5330MHz
DC Voltage	-	-	3	V	
Input Power	-	-	28	dBm	
Source Impedance (single ended)	-	50	-	Ω	
Load Impedance (single ended)	-	50	-	Ω	

Notes: (1) With Matching Network (Ref. Testing Environment Circuit as shown below)

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Mechanical Specification

Parameters	Specifications
Dimension	1.8 x 1.4 x 0.65 mm
Mounting Type	SMD Mount

Environmental Specification

Parameters	Specifications
Operating Temperature Range	-40°C ~ +105°C
Storage Temperature Range	-20°C ~ +95°C
RoHS Complaint	Yes
Maximum Input Power(dBm)	+28@50°C
ESD Voltage (HBM)	> 100 V
ESD Voltage (CDM)	> 100 V
Moisture Sensitivity Levels	3

Ordering Information

Part Number	Description
AFII-LW-0017	5250MHz SMD SAW Filter on Cut Tape
AFII-LW-0017-T	5250MHz SMD SAW Filter on Tape & Reel
AFII-LW-0017-EVB	5250MHz SMD SAW Filter Evaluation Board

Note: Other options not listed may be available upon request via [Abracon online support](#)

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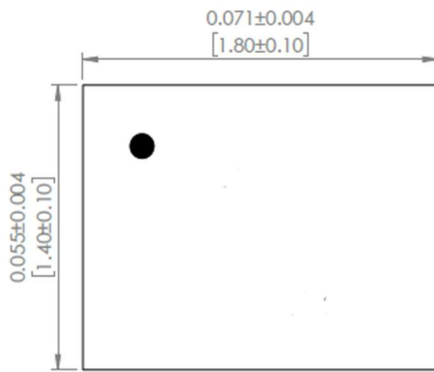
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Product Dimensions

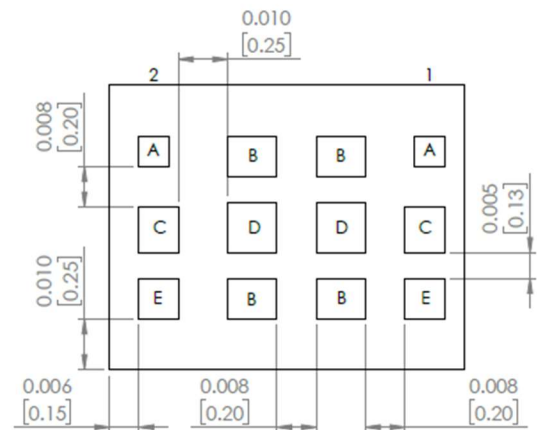
Units : INCHES [mm]



TOP VIEW



SIDE VIEW

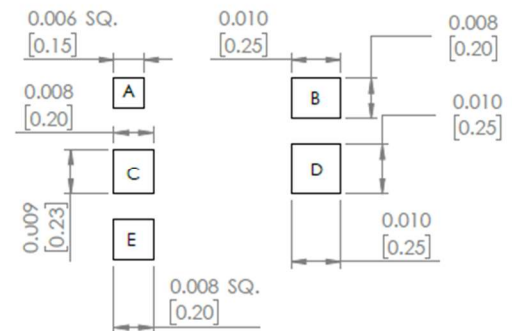


BOTTOM VIEW



FRONT VIEW

Pin #	Function
1	Output
2	Input
Others	Ground



All tolerances are ± 0.05 mm except overall length and width ± 0.10 mm



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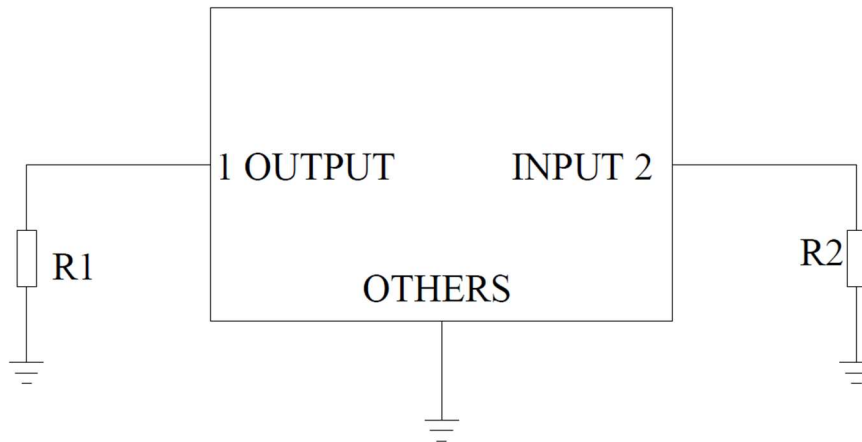


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Measurement Circuit



Port	Matching Component
Input	R1: 50Ω
Output	R2: 50Ω

1. Matching component values shown are recommended based on the evaluation board. Value adjustment may be required on the end-user's circuit boards for the selected component manufacturer and PCB material.

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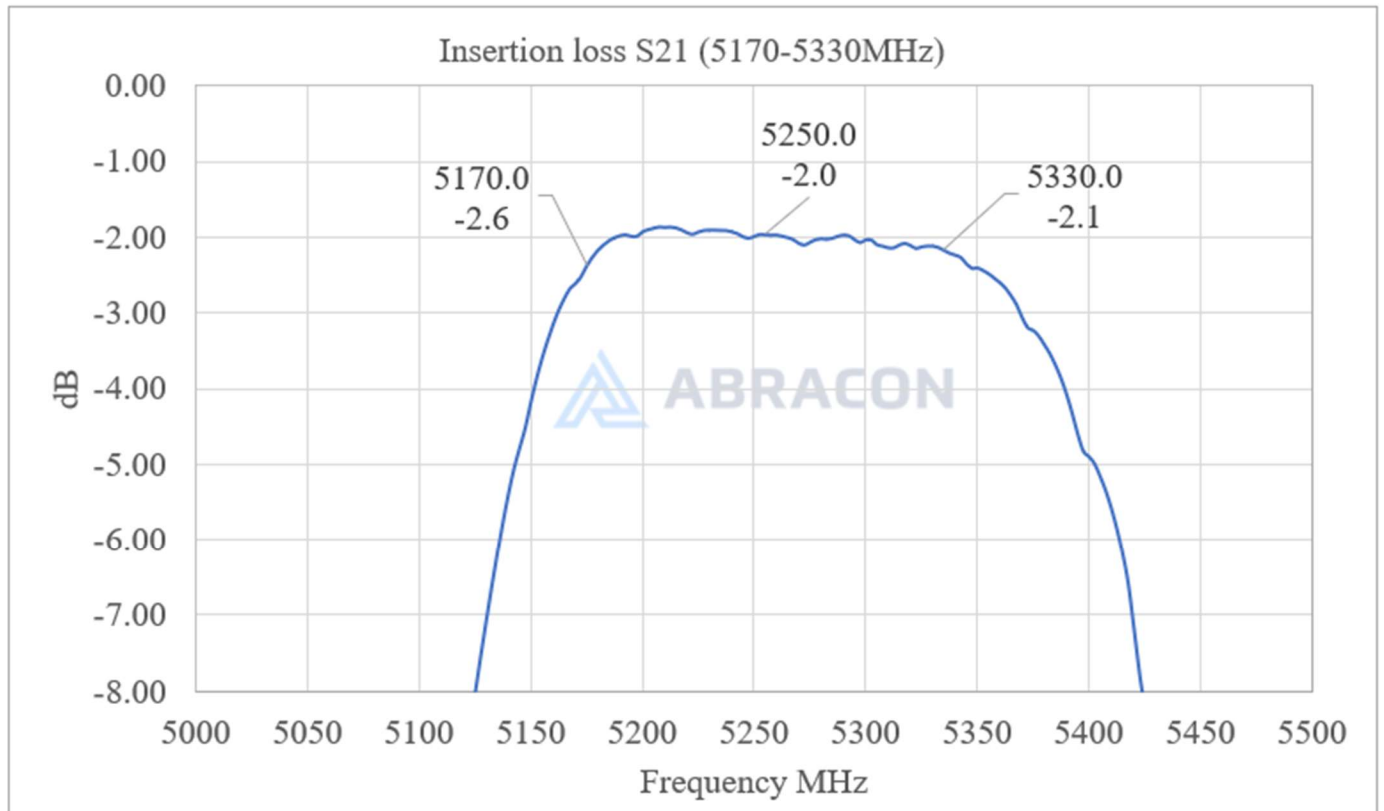
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Frequency Characteristics

S21 narrow band



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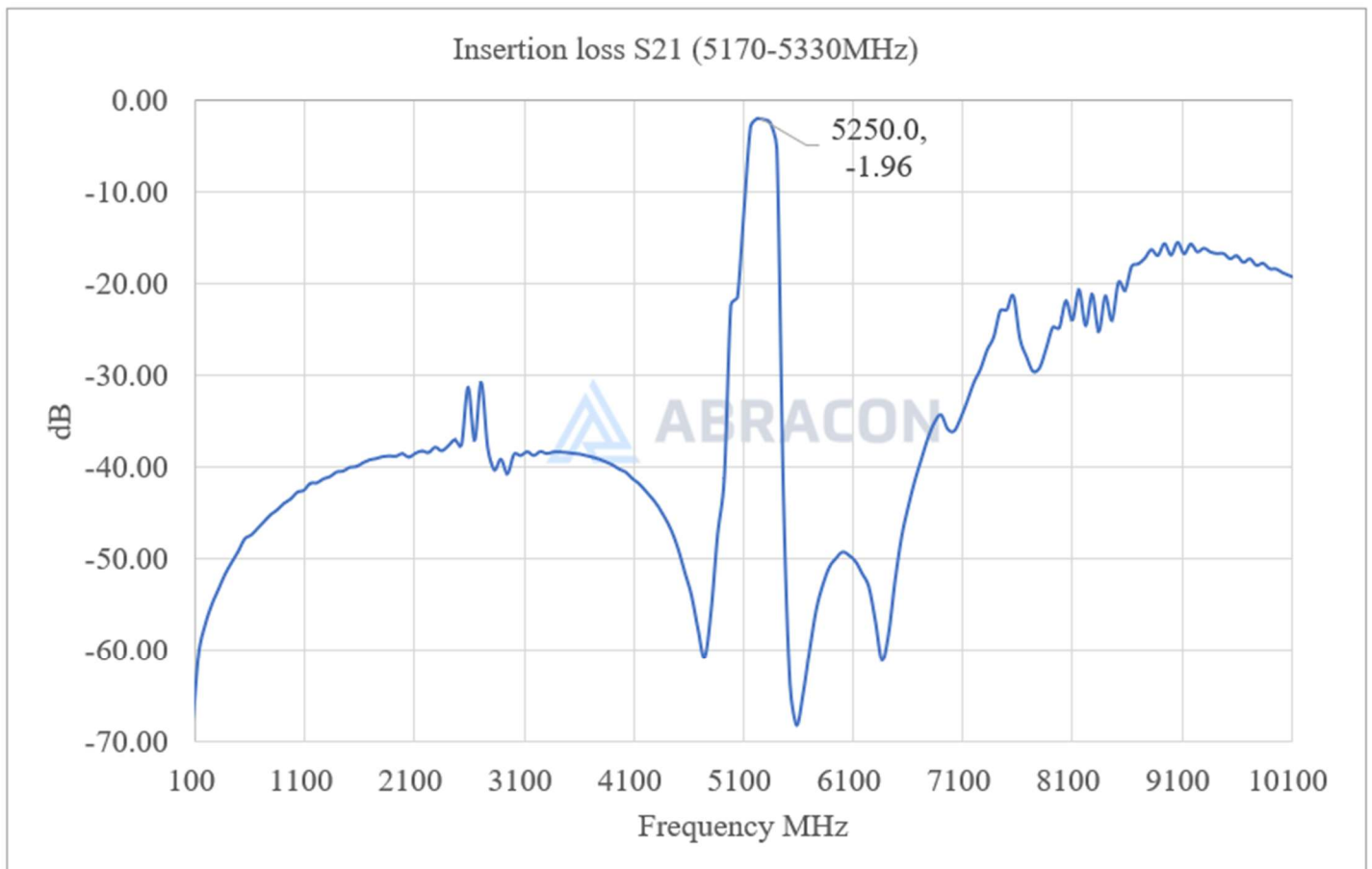


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S21 wide band



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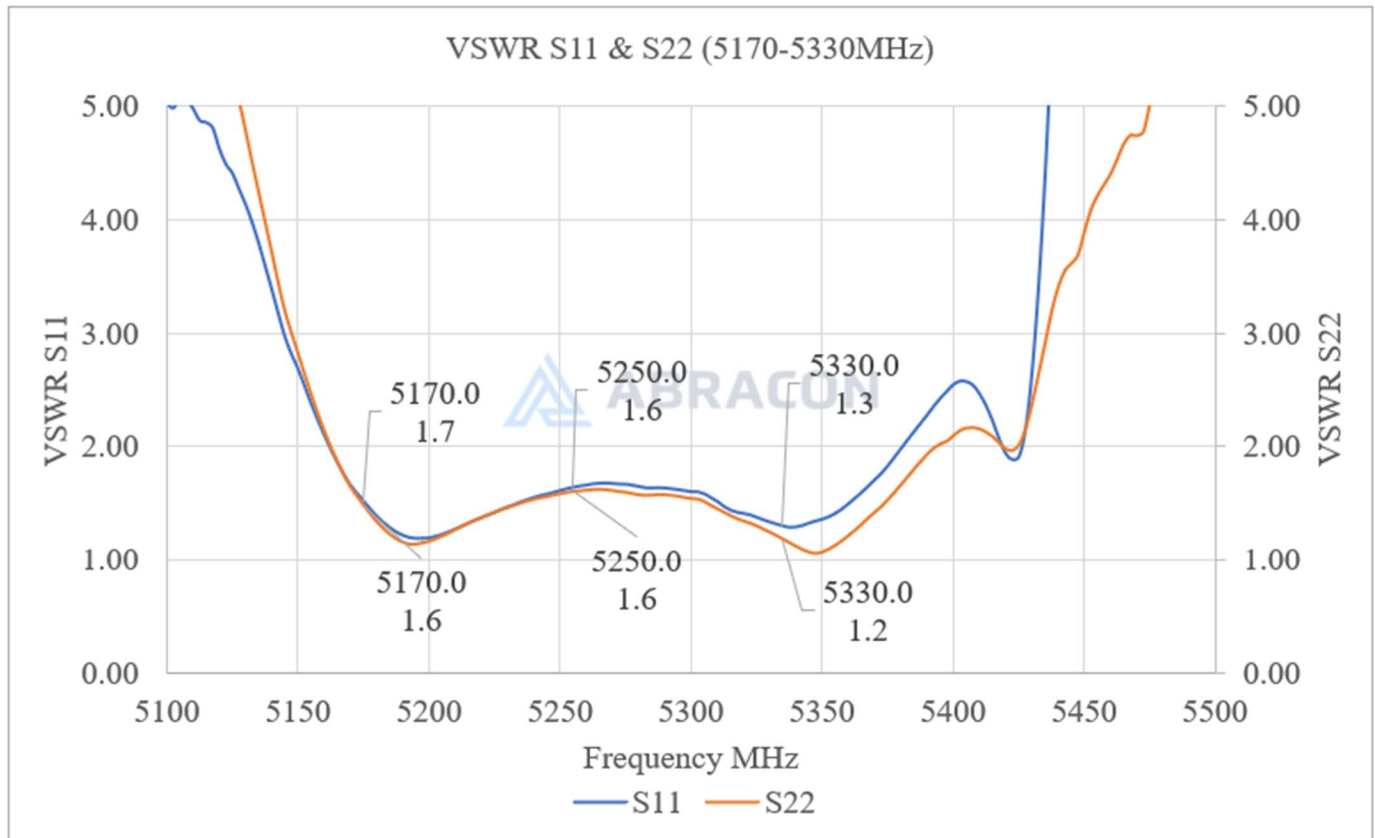


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VSWR (S11 & S22)





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Reflow Profile

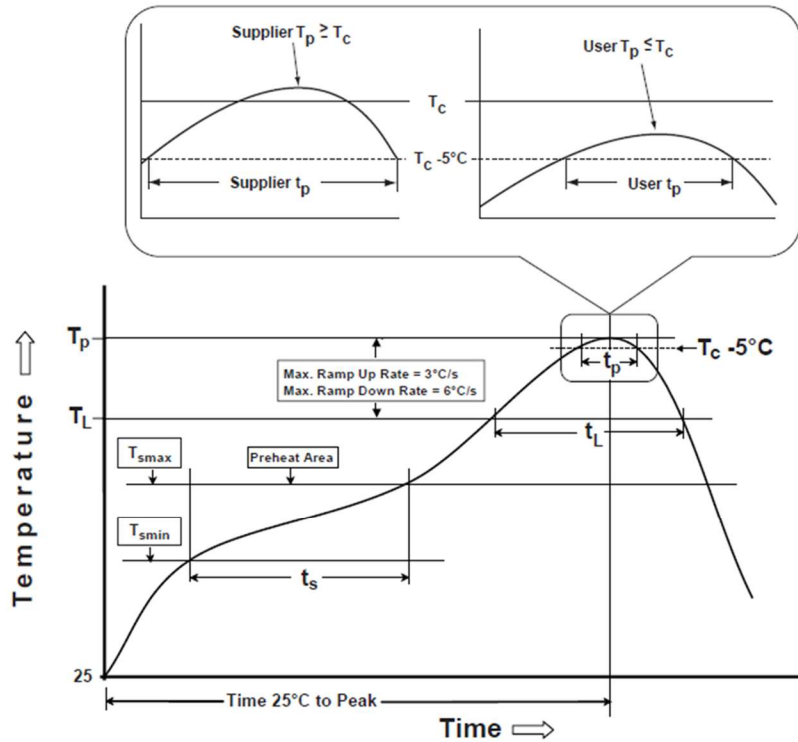


Table 1

SnPb Eutectic Process Classification Temperatures (T_c)

Package Thickness	Volume mm ³ <350	Volume mm ³ >350
<2.5 mm	235 °C	220 °C
≥2.5 mm	220 °C	220 °C

Table 2

Pb-Free Process Classification Temperatures (T_c)

Package Thickness	Volume mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >2000
<1.6 mm	260 °C	260 °C	260 °C
1.6 mm - 2.5 mm	260 °C	250 °C	245 °C
>2.5 mm	250 °C	245 °C	245 °C

Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Preheat / soak		
Temperature minimum (T_{smin})	100°C	150°C
Temperature maximum (T_{smax})	150°C	200°C
Time (T_{smin} to T_{smax}) (t_s)	60 - 120 sec.	60 - 120 sec.
Average ramp-up rate (T_{smax} to T_p)	3°C/sec. max	3°C/sec. max
Liquidous temperature (T_L)	183°C	217°C
Time at liquidous (t_L)	60 - 150 sec.	60 - 150 sec.
Peak package body temperature (T_p)*	see Table 1	see Table 2
Time (t_p)** within 5°C of the specified classification temperature (T_c)	20 sec.	30 sec.
Ramp-down rate (T_p to T_{smax})	6°C/sec. max	6°C/sec. max
Time 25°C to peak temperature	6 min. max	8 min. max
Reflow cycles	2 max	2 max

*Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.

**Tolerance for time at peak profile temperature (t_p) is defined as supplier minimum and a user maximum.

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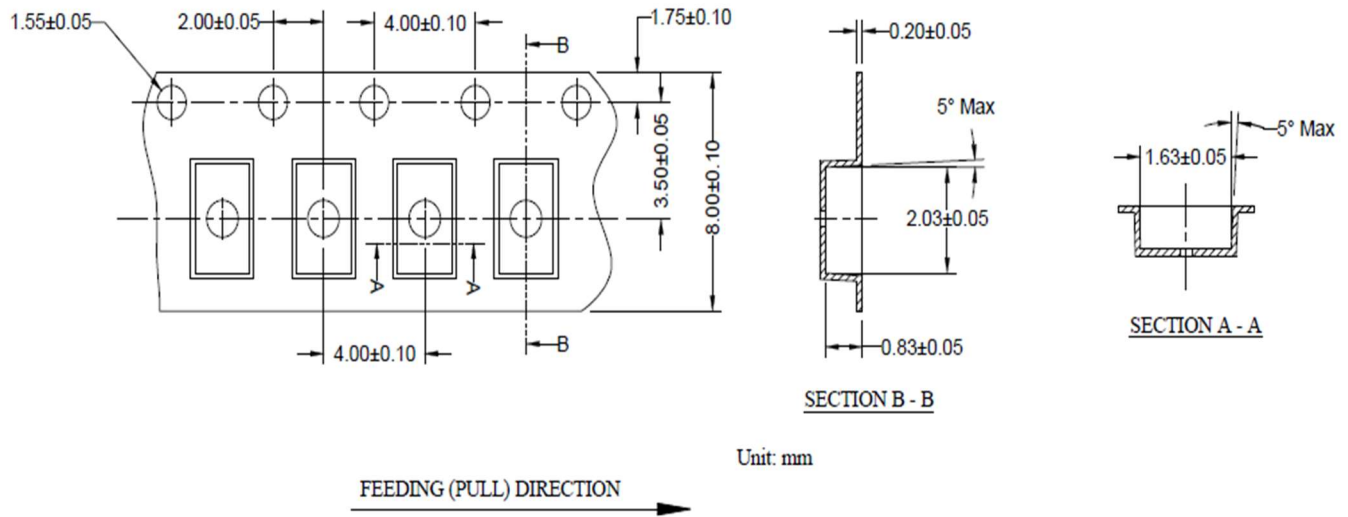
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Packaging

Tape (Unit: mm)



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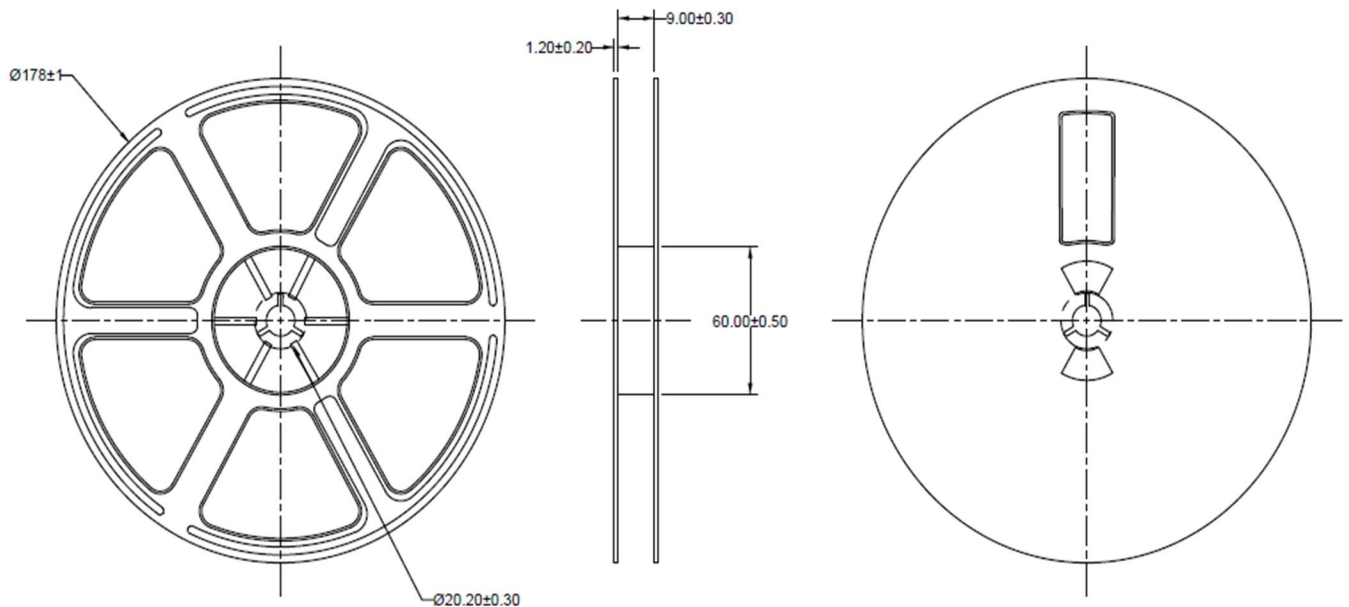


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Reel (Unit: mm)



Unit: mm

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