




SPECIFICATION SHEET

SPECIFICATION SHEET NO.	Q0715-SDF1G03000S336
DATE	July 15, 2023
REVISION	A0
DESCRIPTION	SMD SAW Filter L3.0*W3.0*H1.25mm 3030 Type 6 Pads SDF Series 1.0300GHz, Insertion Loss: 1.5 dB Typical Bandwidth: 40.0MHz Typical Operating Temp. Range -40°C ~+85°C, Reflow Profile Condition 260 °C Max. Tape/Reel, 3000pcs/Reel RoHS/RoHS III compliant
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	TGS SDF 1.03GA TLF
PART CODE	SDF1G03000S336

VENDOR APPROVE			
Issued/Checked/Approved			
DATE: July 15, 2023			

CUSTOMER APPROVE	
DATE:	
7/16/2023	

SMD SAW FILTER 3030 TYPE SDF SERIES

MAIN FEATURE

- SMD SAW Filter L3.0*W3.0*H1.25mm 3030 Type 6 Pads
- Low-loss SAW Components
- Low Amplitude Ripple
- Sharp Rejection As Both Out-bands
- Usable Passband 40.00MHz
- Package code DCC6C
- Electronic Sensitive Device (ESD)
- Cross More Competitors Part
- RoHS/RoHS III Compliant



APPLICATION

- Bluetooth, wireless communication set
- Communication Electronics

RFQ
Request For Quotation

PART CODE GUIDE

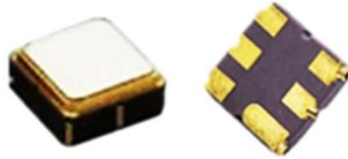
SDF	1G03000	S	336
1	2	3	4

- 1) SDF: SMD SAW Filter L3.0*W3.0*H1.25mm 3030 Type 6 Pads SDF Series
- 2) 1G03000: Frequency range code for 1.030000GHz
- 3) S: SMD type, Package Tape/Reel,
- 4) 336: Internal code (A~Z or 1~9 or Blank) for custom specification

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DIMENSION (Unit: mm, Tol.: +-0.15mm)

Image for reference



Marking

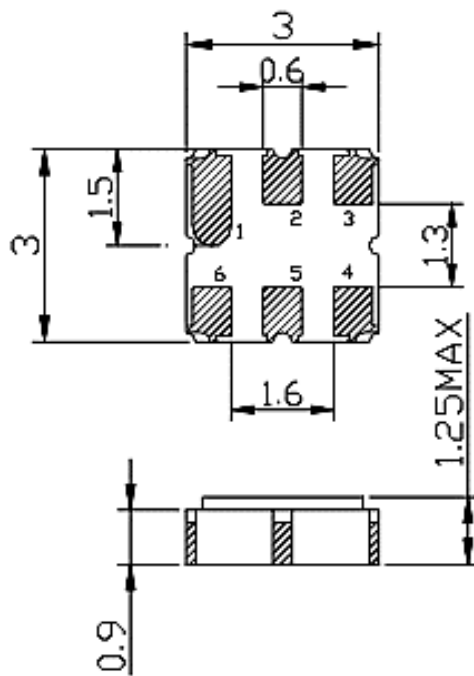
Line 1: Internal code

Line 2: ● Pin 1 + Special code

SDF series

L3.0*W3.0*H1.25mm

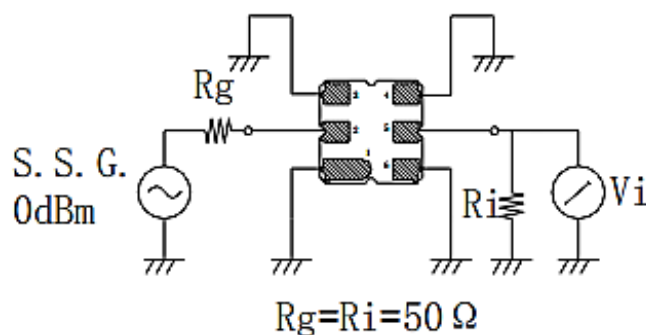
3030 Type



Pin	Configuration
2	Input
5	Output
1,3,4,6	Ground

Test Circuit

(Bottom View)



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ELECTRICAL PARAMETERS

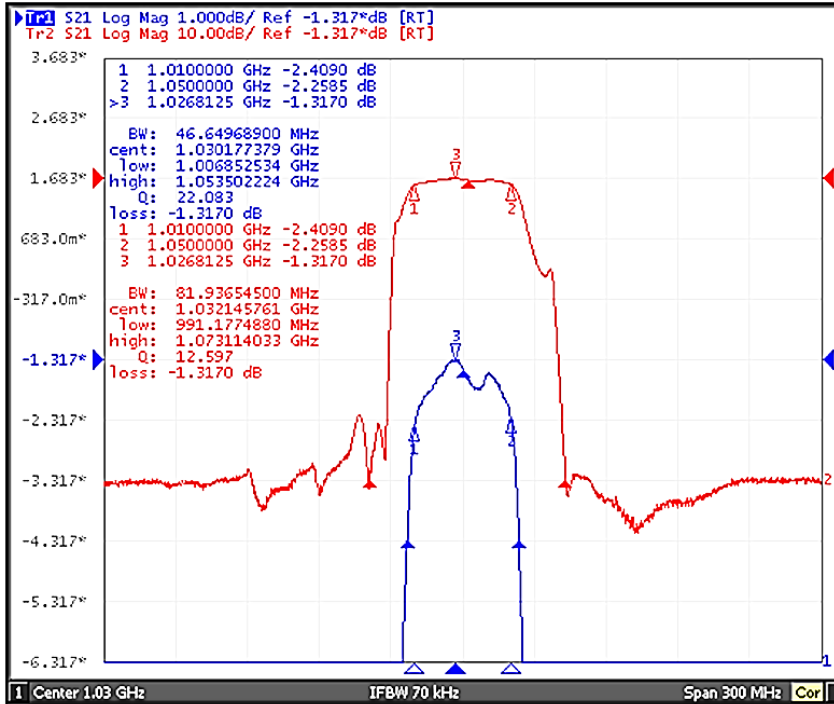
Parameter	Part No. Symbol	Units	Value			
			Min.	Typical	Max.	
Original Manufacturer	TGS		TGS Crystals			
Holder Type	SDF		SMD SAW Filter, L3.0*W3.0*H1.25mm 3030 Type 6 Pads			
Center Frequency (fc)	1.03G	GHz	1.030000			
DC Voltage (VDC)	A	V		3.0		
Operation Temperature Range (T)		°C	-40		+85	
Storage Temperature Range (Tstg)		°C	-40		+85	
RF Power Dissipation (P)		dBm		10		
Insertion Loss (Min.) (IL)		dB		1.5	2.0	
Amplitude Ripple (p-p) 1010.00 – 1050.00 MHz ($\Delta\alpha$)		dB		0.9	1.0	
3dB Bandwidth (BW3dB)		MHz		46.6		
50dB Bandwidth (BW50dB)		MHz		81.9		
Shape Factor (BW50dB/BW3dB)		/		2.0	/	
Group Delay Ripple 1010.00 – 1050.00 MHz (GDR)		ns	20.0	50.0		
Aging (Absolute Value during the First Year)		ppm/Year		$\leq\pm 10$		
Input VSWR 1010.00 – 1050.00 MHz				1.8:1.0	2.0:1.0	
Output VSWR 1010.00 – 1050.00 MHz				1.8:1.0	2.0:1.0	
Absolute Attenuation (a)		DC -960MHz	dB	45.0	48.0	
		1120~1500MHz		40.0	45.0	
	1500~2500MHz	40.0		43.0		
Package	T		Tape/Reel			
RoHS Status	LF		RoHS III compliant			
Add Value			Blank: N/A			
Internal Control Code			Blank: N/A			

Electronic Characteristics: 1) Test Temperature: 25°C±2°C 2) Terminating source impedance: 50Ω 3) Terminating load impedance: 50Ω

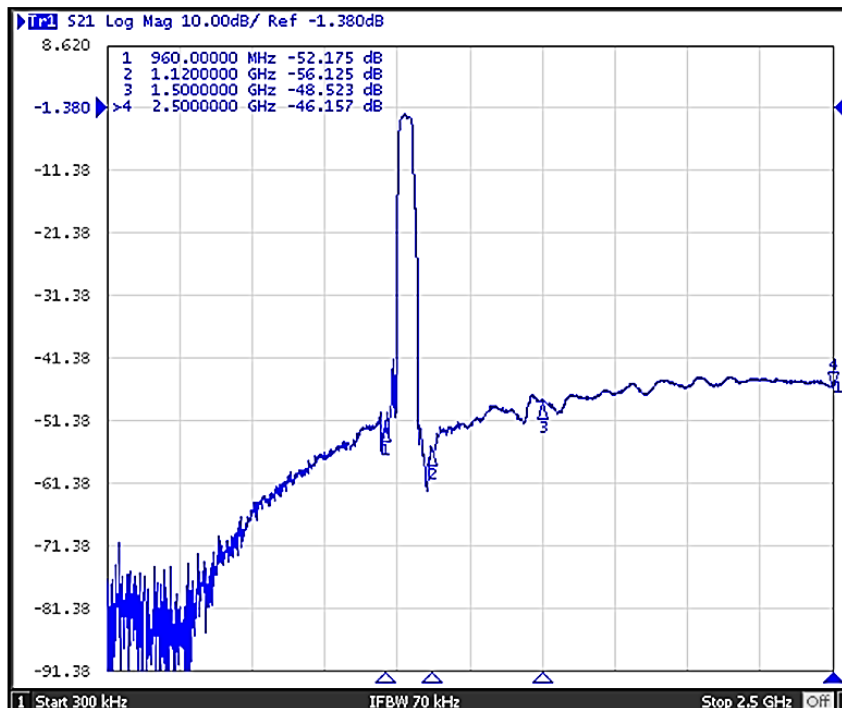
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FREQUENCY CHARACTERISTICS



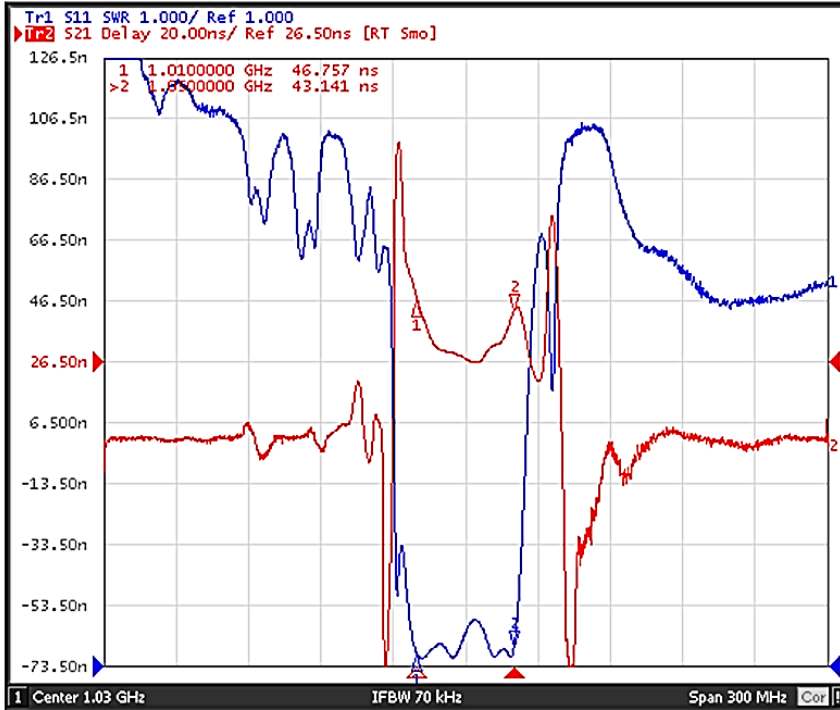
Frequency Response



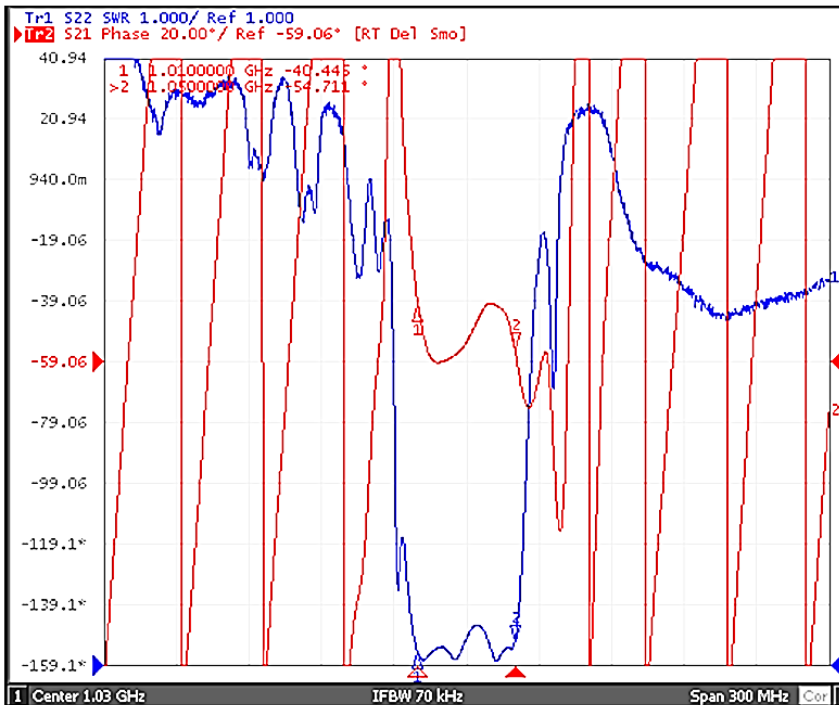
Frequency Response (wideband)

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FREQUENCY CHARACTERISTICS



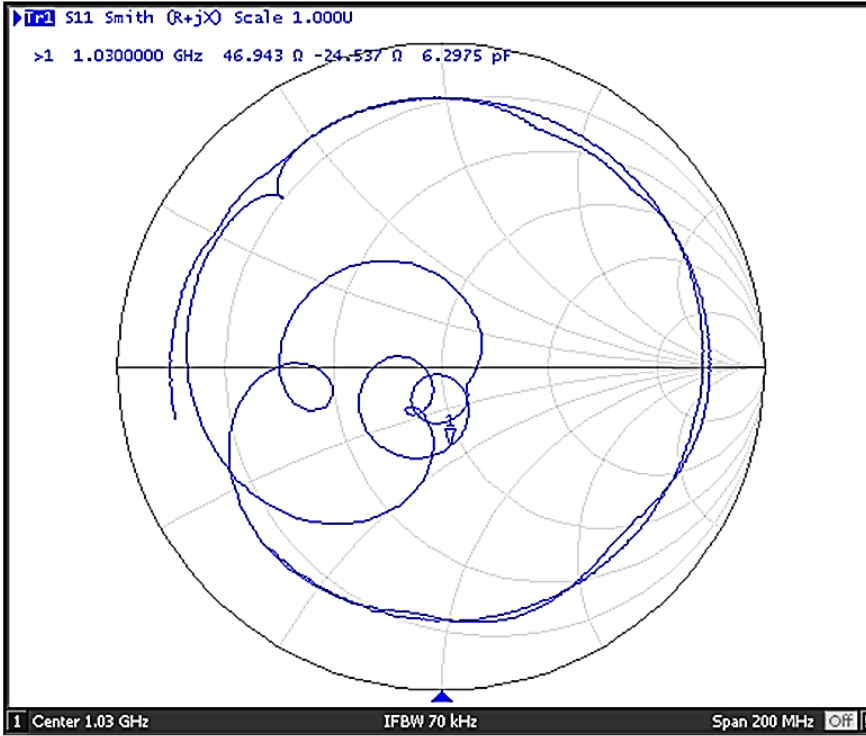
Delay Ripple & S11 VSWR



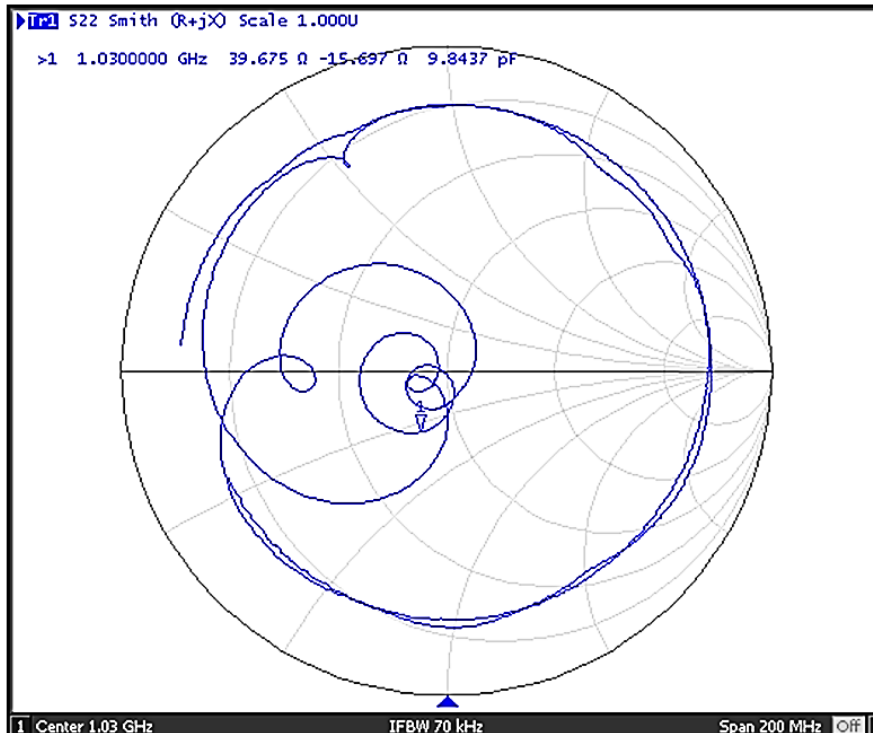
Phase Linearity & S22 VSWR

SMD SAW FILTER 3030 TYPE SDF SERIES

FREQUENCY CHARACTERISTICS



S11 Smith Chart



S22 Smith Chart

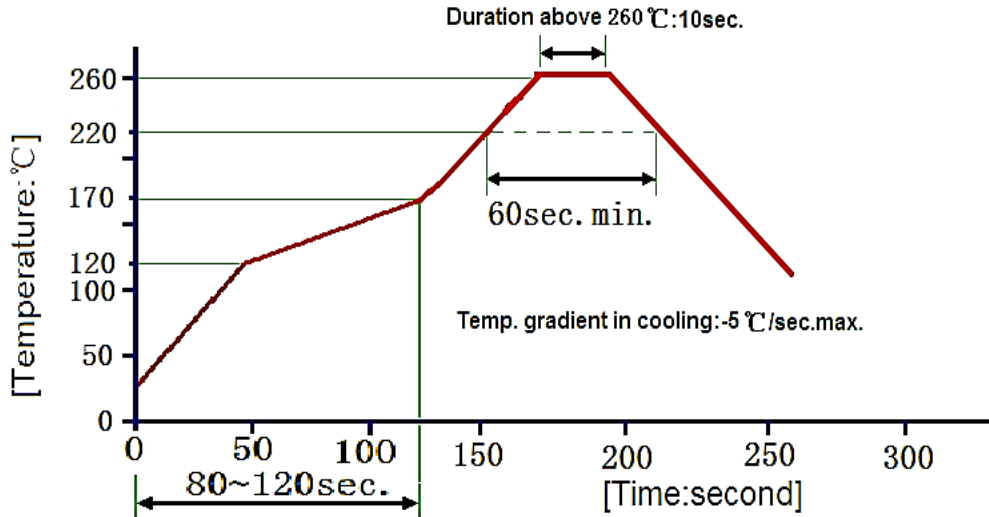
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RELIABILITY

Test Items	Test Method And Conditions	Requirement
Temperature Storage	(1) Temperature: 85°C±2°C , Duration: 250h , Recovery time: 2h±0.5h (2) Temperature: -55°C±3°C , Duration: 250h ,Recovery time: 2h±0.5h	It shall remain electrical performance after tests
Humidity Test	Conditions: 60°C±2°C , 90~95% RH Duration: 250h	
Thermal Shock	Heat cycle conditions: TA=-55°C±3°C, TB=85°C±2°C, t1=t2=30min, Switch time: ≤3min, Cycle time: 100 times, Recovery time: 2h±0.5h.	
Vibration Fatigue	Frequency of vibration: 10~55Hz Amplitude:1.5mm Directions: X,Y and Z Duration: 2h	
Drop Test	Cycle time: 10 times Height: 1.0m	
Solderability	Temperature: 245°C±5°C Duration: 3.0s--5.0s Depth: DIP--2/3 , SMD--1/5	
Resistance to Soldering Heat	(1)Thickness of PCB:1mm , Solder condition: 260°C±5°C , Duration: 10±1s (2)Temperature of Soldering Iron: 350°C±10°C , Duration: 3~4s , Recovery time : 2 ± 0.5h	

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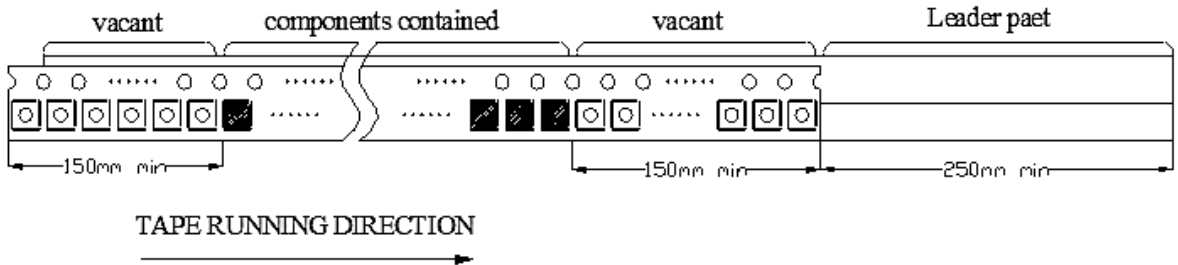
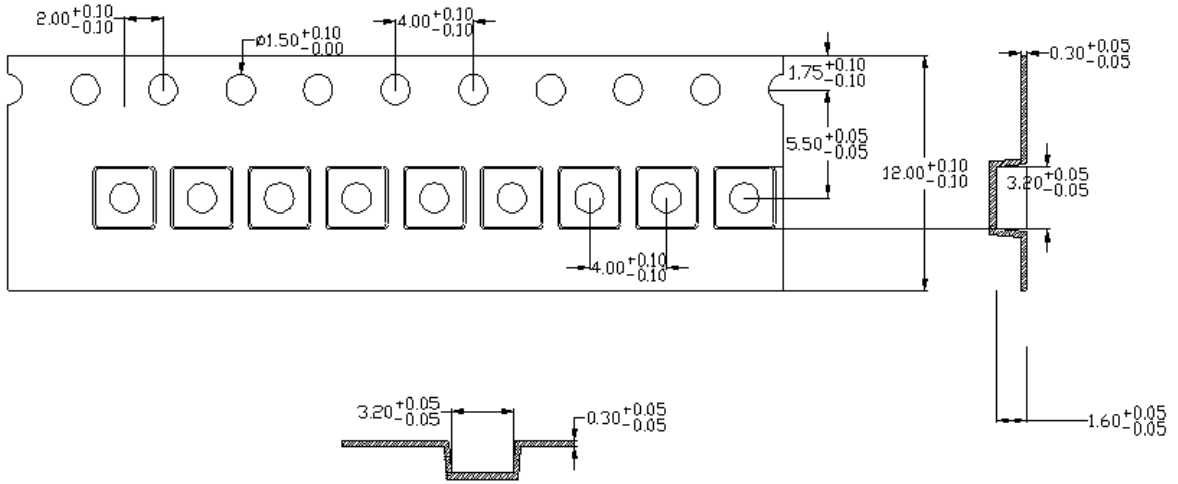
SUGGESTED REFLOW PROFILE (For Reference Only)



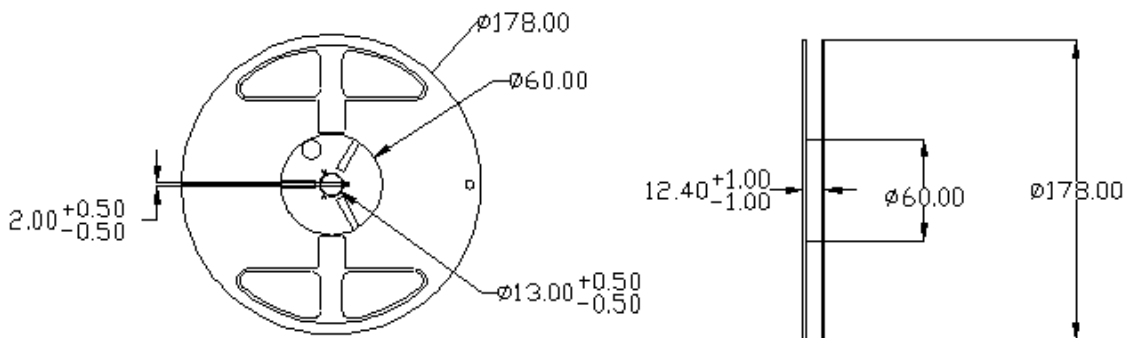
Reflow cycles: 3 cycles max.

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TAPE DIMENSION (Unit: mm, 3000pcs/Reel)



REEL DIMENSION (Unit: mm)



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CAUTION

1. As a result of the particularity of inner structure of SAW products, it easy to be breakdown by electrostatic, so we should pay attention to ESD protect in the test.
2. Static voltage between signal load and ground may cause deterioration and destruction of the component. Please avoid static voltage.
3. Ultrasonic cleaning may cause deterioration and destruction of the component. Please avoid ultrasonic cleaning.
4. Only leads of component may be soldered. Please avoid soldering another part of component.
5. There is a close relationship between the device's performance and matching network. The specifications of this device are based on the test circuit shown above. L and C values may change depending on board layout. Values shown are intended as a guide only.
6. The temperature of manual welding should not exceed 300 °C.
7. The specifications of this device are based on the test circuit shown above and subject to change or obsolescence without notice.
8. All equipment designs utilizing this product must be approved by the appropriate government agency prior to manufacture or sale.
9. Our liability is only assumed for the Surface Acoustic Wave (SAW) component(s) perse, not for applications, processes and circuits implemented within components or assemblies.
10. For questions on technology, prices and delivery, please contact our sales offices or e-mail: sales@NextGenComponent.com.

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