




SPECIFICATION SHEET NO.	R1021- SDF916M000S676	
ORIGINAL MFG/PART NO	TGS Crystals/SDF 916.0MA TLF/DX9676/SXF0916	
DATE	Oct. 21, 2024	
REVISION	A2	Updated With Most Recent Data
DESCRIPTION AND MAIN PARAMETRICS	<p>SMD SAW Filter 6 Pads SDF Series, Package code DCC6C</p> <p>Case Dimension L3.0*W3.0*H1.25mm</p> <p>916.000MHz, Insertion Loss: 2.8 dB Typical;</p> <p>Bandwidth: 2.0MHz</p> <p>Operating Temp. Range -40°C ~+85°C;</p> <p>Reflow Profile Condition 260 °C Max.</p> <p>Package in Tape/Reel, 3000pcs/Reel</p> <p>REACH/RoHS/RoHS III Compliant</p>	
CUSTOMER		
CUSTOMER PART NUMBER		
CROSS REF. PART NUMBER		
MEMO		

VENDOR APPROVE		
Issued/Checked/Approved		
		
Date: Oct. 21, 2024		

CUSTOMER APPROVE
Date:

MAIN FEATURE

- SMD SAW Filter Case 3030, 6 Pads, Package code DCC6C
- Case Dimension L3.0*W3.0*H1.25mm
- Low-loss SAW Components and Low Amplitude Ripple
- Sharp Rejection As Both Out-bands
- Usable Passband 2.00MHz
- Electronic Sensitive Device (ESD)
- Cross More Competitors Part
- Reflow Profile Condition 260 °C Max.
- REACH/RoHS/RoHS III Compliant

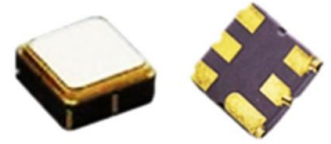


Image shown is a representation only. Exact specifications should be obtained from the product dimension.



APPLICATION

- Communication Electronics and More
- Bluetooth, Wireless Communication Set

HOW TO ORDER

- Please follow up part code guide and indicate part code when you order or RFQ.

PART CODE GUIDE

RFQ
 Request For Quotation

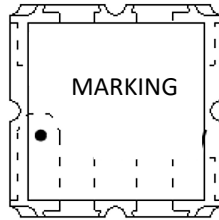
CODE	NAME	KEY SPECIFICATION OPTION
SDF	Product Series	SMD SAW Filter, 6 pads, Case 3030, Package code DCC6C Case Dimension L3.0*W3.0*H1.25mm
916M0	Frequency Range	916M0: 916.000MHz
00	Internal Control	Letter or Digits (A~Z, a~z or 1~9)
S	SMD Type Package	Tape/Reel
676	Special Parametric	Letter or Digits (A~Z, a~z or 1~9)
- XX	Suffix	Blank: N/A XX: Internal Control Code, Letter A~Z, a~z or digits (0~9) for Special/Custom Parameters

DIMENSION (Unit: mm)

Case 3030, 6 Pads

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

Top View

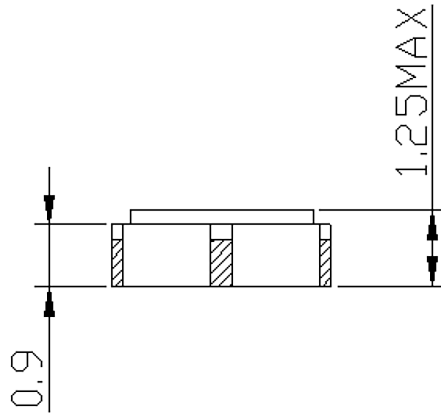


MARKING

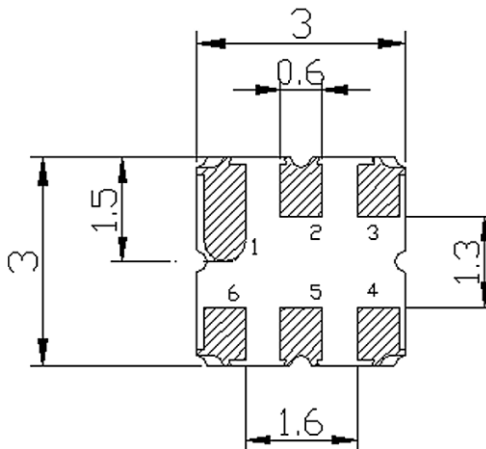
Line 1: Internal Code

Line 2: ● Pin 1 + QC Code

Side View



Bottom View



PIN	CONFIGURATION
2	Input
5	Output
1, 3 4, 6	Ground

ELECTRICAL CHARACTERISTICS AND RATING - Ta = 25°C

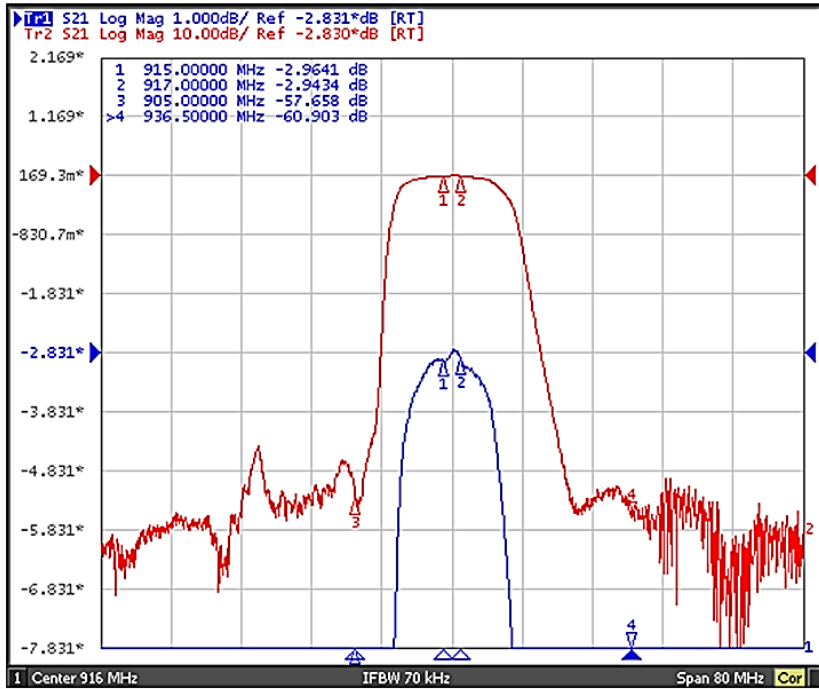
PARAMETER	SYMBOLS	UNITS	VALUE		
			MIN.	TYPICAL	MAX.
DC Voltage	-	VDC	50		
Operating Temperature Range	T J	°C	-40		+85
Storage Temperature Range	T STG	°C	-40		+125
RF Power Dissipation	P	dBm	10		

ELECTRICAL CHARACTERISTICS

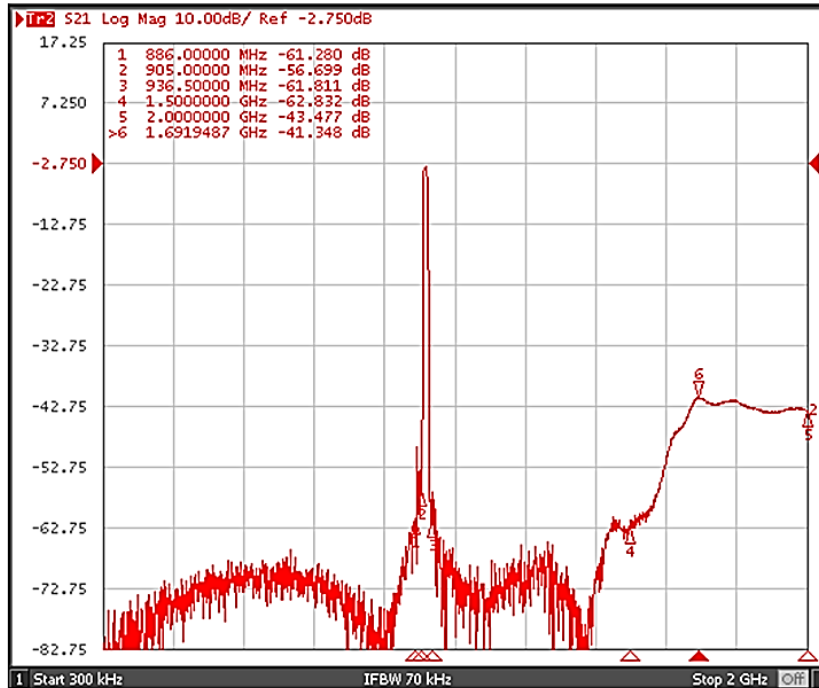
- Test Temperature: 25°C±2°C
- Terminating source impedance: 50Ω and Terminating source impedance: 50Ω

PARAMETER		SYMBOLS	UNITS	VALUE		
				MIN.	TYPICAL	MAX.
Center Frequency		fc	MHz		916.00	
Insertion Loss		IL	dB	-	2.8	3.5
Insertion Loss: 915 -917MHz		IL	dB		2.9	4.5
Amplitude Ripple (p-p): 915 -917MHz		Δα	dB		0.3	1.0
Group Delay Ripple: 915 -917MHz		GDR	ns		10.0	30.0
Absolute Attenuation	DC - 886MHz	α	dB	50.0	55.0	
	905MHz			40.0	48.0	
	936.50MHz			45.0	50.0	
	936.5- 1500MHz			50.0	55.0	
	1500 - 2000 MHz			37.0	40.0	
Input VSWR: 915 -917MHz					1.5:1.0	2.0:1.0
Output VSWR: 915 -917MHz					1.5:1.0	2.0:1.0

FREQUENCY CHARACTERISTICS

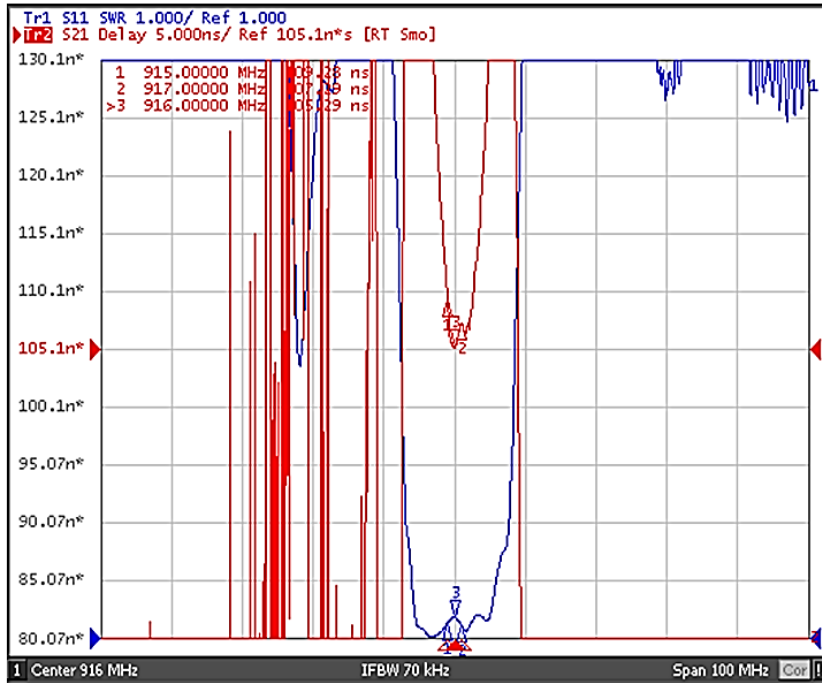


Frequency Response

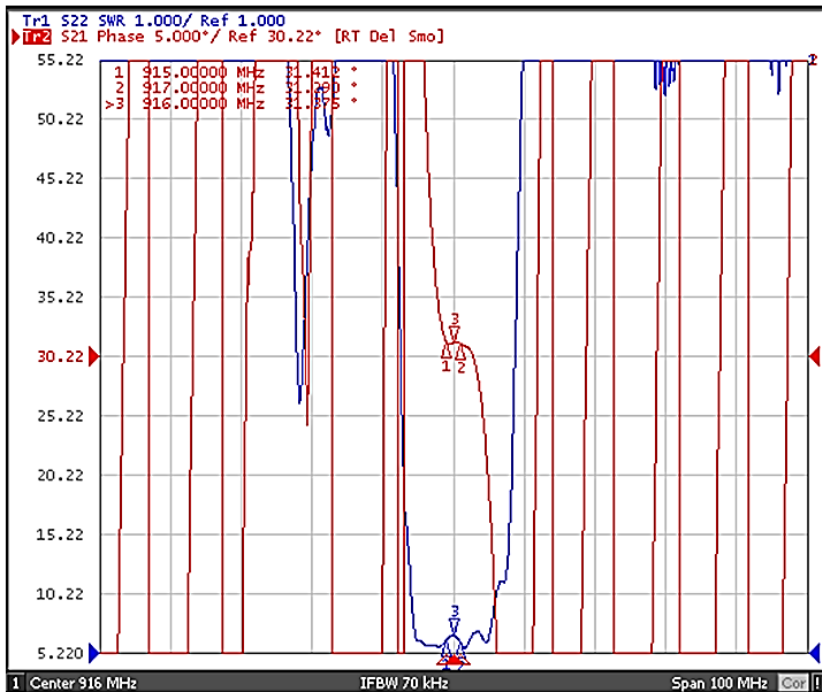


Frequency Response (wideband)

FREQUENCY CHARACTERISTICS

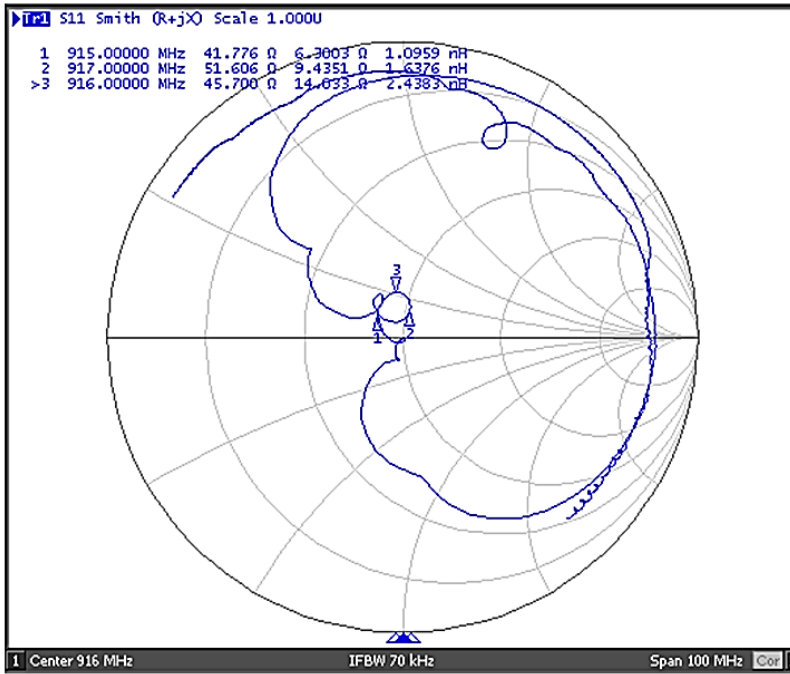


Delay Ripple & S11 VSWR

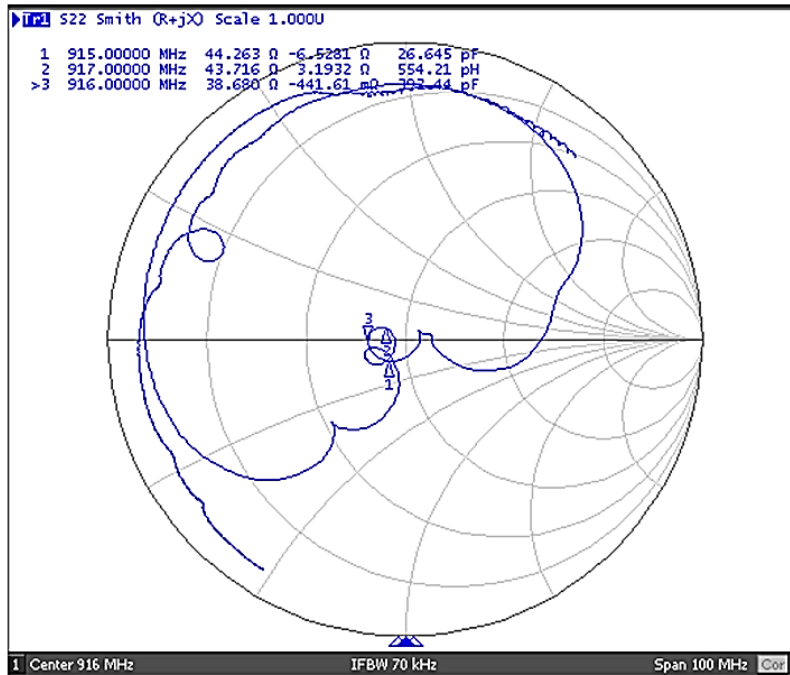


Phase Linearity & S22 VSWR

FREQUENCY CHARACTERISTICS



S11 Smith Chart

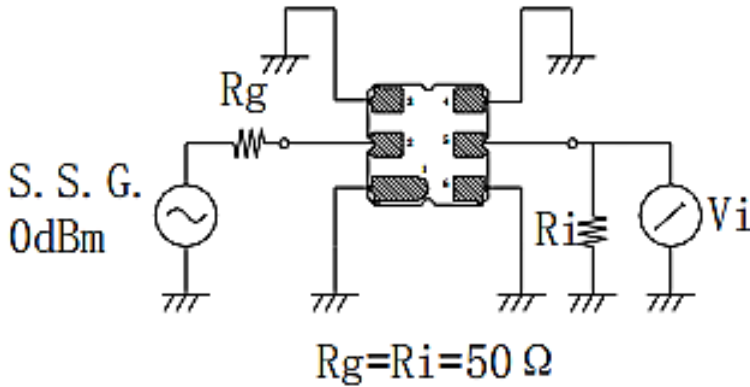


S22 Smith Chart

RELIABILITY - SAW COMPONENTS SHALL REMAIN ELECTRICAL PERFORMANCE AFTER TESTS

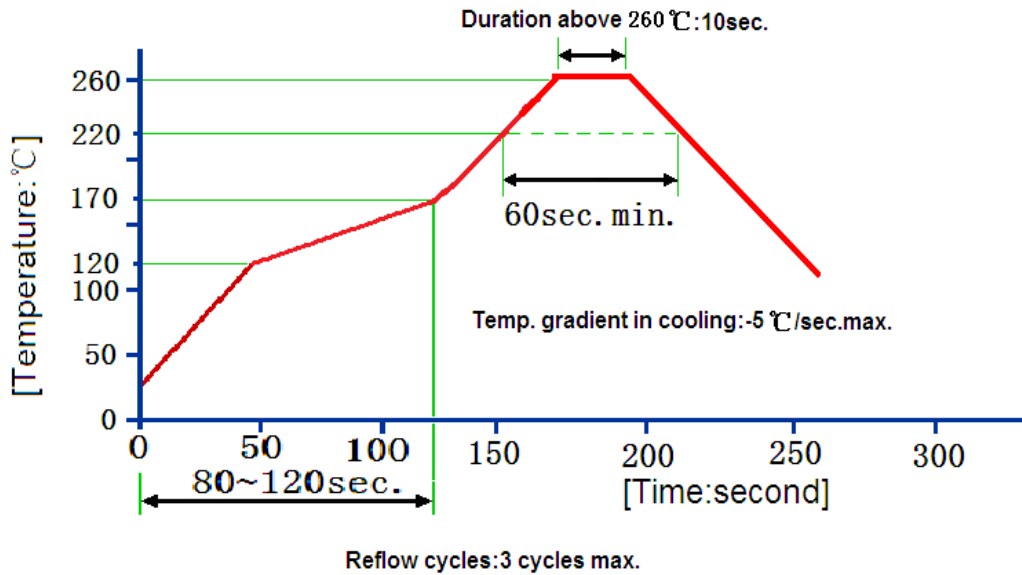
TEST ITEMS	TEST METHOD AND CONDITIONS	REQUIREMENT
Temperature Storage	<ol style="list-style-type: none"> 1) Temperature: 85°C±2°C , Duration: 250h, Recovery time: 2h±0.5h 2) Temperature: -55°C±3°C , Duration: 250h, Recovery time: 2h±0.5h 	It Shall Remain Electrical Performance After Tests
Humidity Test	<ol style="list-style-type: none"> 1) Conditions: 60°C±2°C , 90~95% RH 2) Duration: 250h 	It Shall Remain Electrical Performance After Tests
Thermal Shock	Heat cycle conditions: <ol style="list-style-type: none"> 1) TA=-55°C±3°C, 2) TB=85°C±2°C, 3) t1=t2=30min, 4) Switch time: ≤3min, 5) Cycle time: 100 times, 6) Recovery time: 2h±0.5h. 	It Shall Remain Electrical Performance After Tests
Vibration Fatigue	<ol style="list-style-type: none"> 1) Frequency of vibration: 10~55Hz 2) Amplitude:1.5mm 3) Directions: X,Y and Z 4) Duration: 2h 	It Shall Remain Electrical Performance After Tests
Drop Test	<ol style="list-style-type: none"> 1) Cycle time: 10 times 2) Height: 1.0m 	It Shall Remain Electrical Performance After Tests
Solderability	<ol style="list-style-type: none"> 1) Temperature: 245°C±5°C 2) Duration: 3.0s--5.0s 3) Depth: DIP--2/3 , SMD--1/5 	It Shall Remain Electrical Performance After Tests
Resistance to Soldering Heat	<ol style="list-style-type: none"> 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 	It Shall Remain Electrical Performance After Tests

TEST CIRCUIT - Bottom View

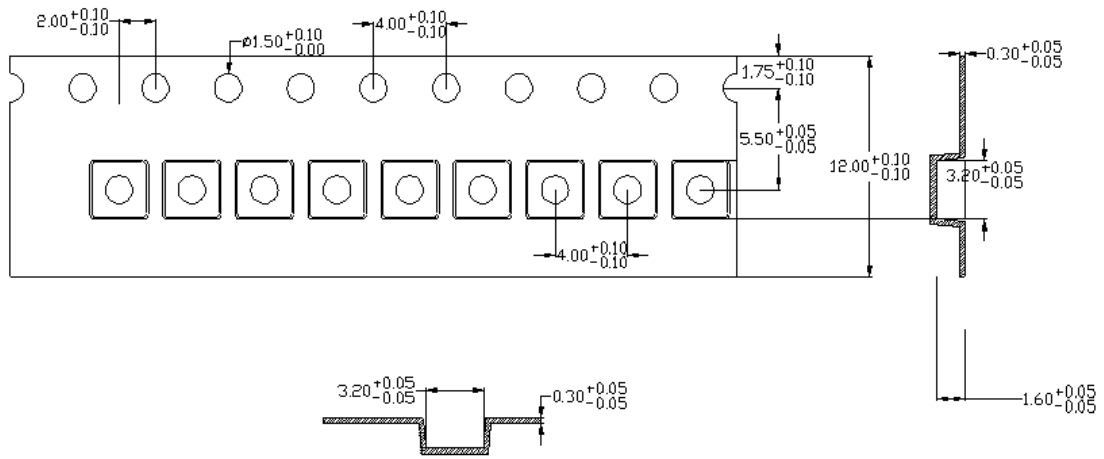


PIN	CONFIGURATION
2	Input
5	Output
1, 3	Ground
4, 6	

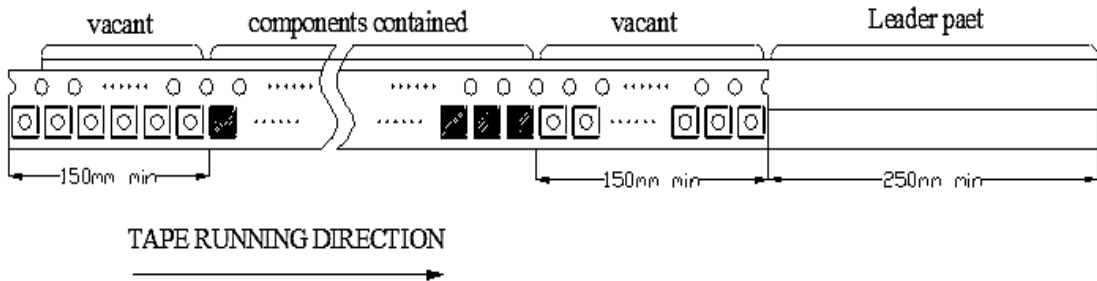
RECOMMENDED REFLOW SOLDERING DIAGRAM (For Reference Only)



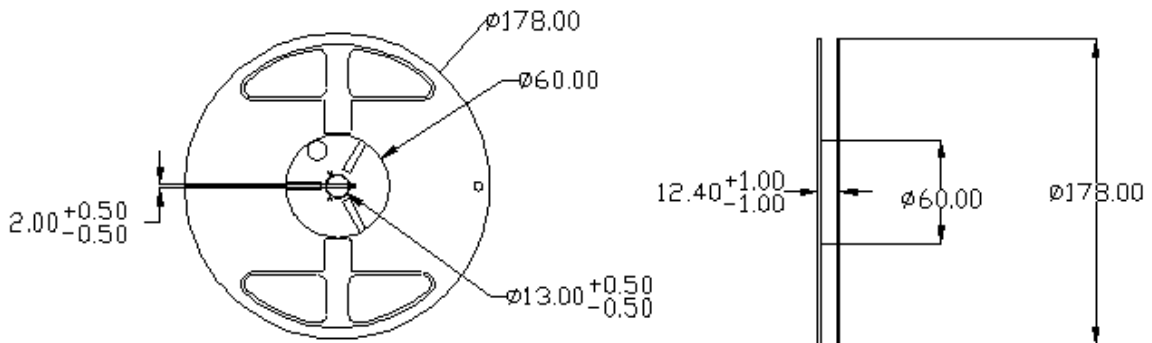
TAPE DIMENSION (Unit: mm, 3000pcs/Reel)



CARRIER TAPE



REEL DIMENSION (Unit: mm)



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.

IMPORTANT NOTES AND DISCLAIMER

1. **ROHS COMPLIANCE:** The levels of RoHS restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU RoHS Directive (EU) 2015/863 EC (RoHS3). RoHS Test Report for this product can be obtained at Download Center.
2. **REACH COMPLIANCE:** REACH substances of high concern (SVHCs) information is available for this product. Since the European Chemical Agency (ECHA) has published notice of their intent to frequently revise the SVHC listing for the foreseeable future, REACH Test Report for this product can be obtained at Download Center.
3. All Product parametric performance is indicated in the Electrical Characteristics for the listed herein test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.
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8. *NextGen* requires that customers first obtain an RMA (Returned Merchandise Authorization) number prior to returning any products. Returns must be made within 30 days of the date of invoice, be in the original packaging, unused and like-new condition. At the time of quoting or purchasing, a product may say that it is Non-Cancelable/ Non-Returnable (NCNR). These products are not returnable and not refundable.