




**SPECIFICATION SHEET**

<b>SPECIFICATION SHEET NO.</b>	Q0221-SD433M92F4054S
<b>DATE</b>	Feb 21, 2023
<b>REVISION</b>	A0
<b>DESCRIPTION</b>	SMD SAW Filter 3030 Type L3.0*W3.0*H1.1mm 6 Pads SD Series 433.9200MHz, Insertion Loss: 2.5 dB Typical. Band Wide @3dB Pass Band: +/-20MHz Typical. Operating Temp. Range -10°C ~+65°C, Reflow Profile Condition 260 °C Max. Tape/Reel, 1000pcs/Reel RoHS/RoHS III compliant
<b>CUSTOMER</b>	
<b>CUSTOMER PART NUMBER</b>	
<b>CROSS REF. PART NUMBER</b>	
<b>ORIGINAL PART NUMBER</b>	TGS SF 433.92MA SD TLF
<b>PART CODE</b>	SD433M92F4054S

<b>VENDOR APPROVE</b>			
Issued/Checked/Approved			
DATE: Feb 21, 2023			

<b>CUSTOMER APPROVE</b>	
DATE:	

2/21/2023

**SMD SAW FILTER 3030 TYPE SD SERIES**

**MAIN FEATURE**

- SMD SAW Filter 3030 Type 6 Pads
- Dimension L3.0\*W3.0\*H1.1mm
- Low-loss, Compact, And Economical SAW
- Cross more competitors part
- RoHS/RoHS III compliant



**APPLICATION**

- Bluetooth, wireless communication set
- Communication Electronics

**PART CODE GUIDE**

**RFQ**  
Request For Quotation

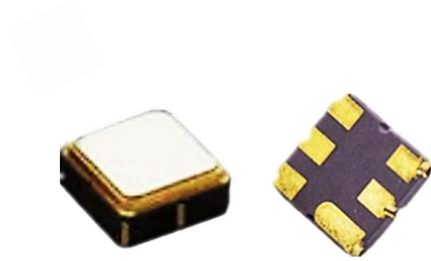
SD	433M92	F	4054	S	
1	2	3	4	5	6

- 1) SD: SMD SAW Filter 3030 Type L3.0\*W3.0\*H1.1mm
- 2) 433M92: Frequency range code for 433.9200MHz
- 3) F: Product code, F: SAW Filter; R: SAW Resonator
- 4) 4054: Special Code (A~Z or 1~9) for custom specification
- 5) S: SMD type, Package Tape/Reel,
- 6) : Internal code (A~Z or 1~9) or Blank

**SMD SAW FILTER 3030 TYPE SD SERIES**

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

Image for reference

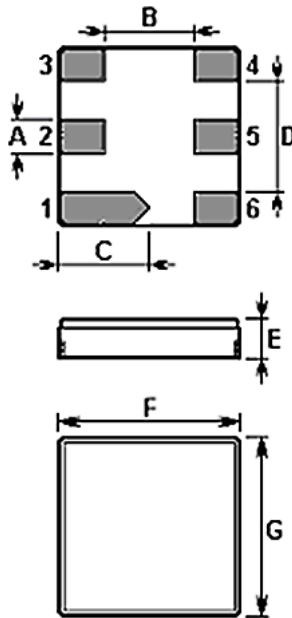


**Marking 1**  
Standard

or

**Marking 2**  
XXF  
4054

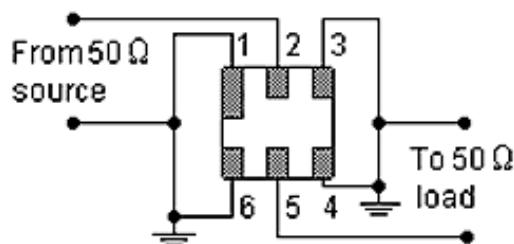
SD series  
L3.0\*W3.0\*H1.1mm



Code	Dimension
A	0.6
B	1.5
C	1.5
D	1.8
E	1.1
F	3.0
G	3.0

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

Matching Circuit

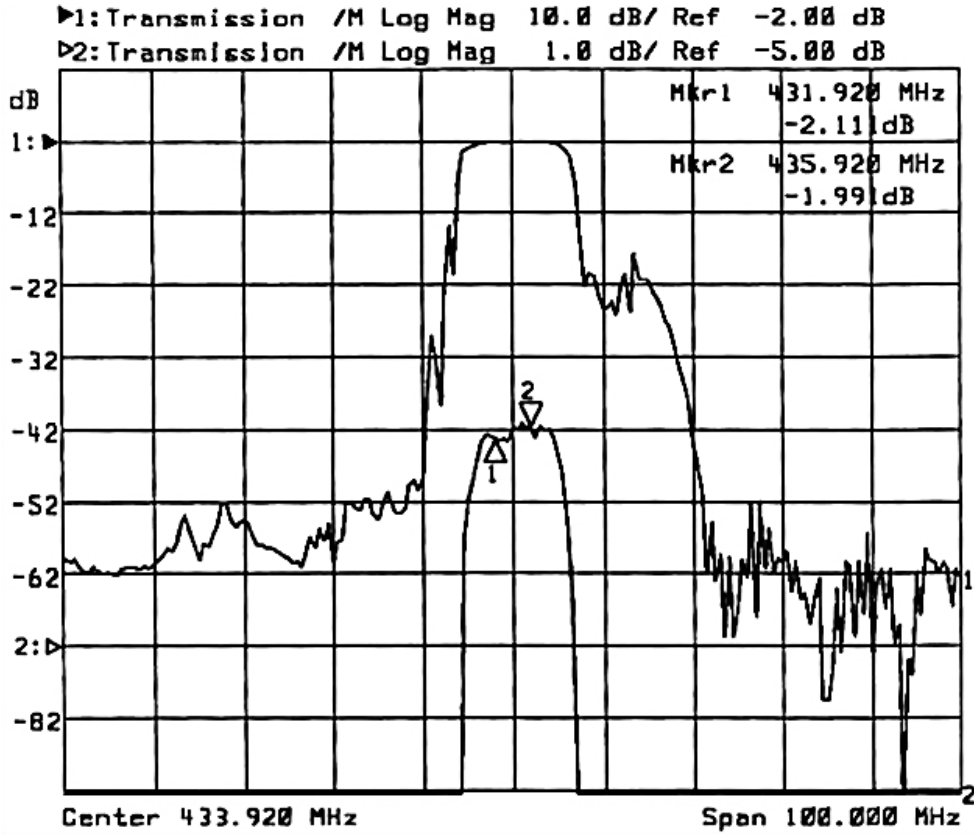


**SMD SAW FILTER 3030 TYPE SD SERIES**
**ELECTRICAL PARAMETERS**

Parameter		Part No. Symbol	Units	Value			
				Min.	Typical	Max.	
Original Manufacturer		TGS	TGS Crystals				
Product Name		SF	SAW Filter				
Center Frequency (f <sub>c</sub> ) (center frequency between 3dB points)		433.92M	MHz	433.9200			
Usable Bandwidth (BW )		A	MHz		±2.0		
Insertion Loss (IL) @ f <sub>c</sub> ± 2MHz			dB	-	2.5	4.0	
Operation Temperature (T <sub>A</sub> )			°C	-10		+65	
Storage Temperature (T <sub>stg</sub> )			°C	-40		+85	
DC Voltage (V <sub>DC</sub> )			V		10		
Input Power Level (P <sub>IN</sub> )			dBm		0		
Input / Output Impedance (Nominal)			Ω		50		
Ultimate Attenuation (α)	DC... f <sub>c</sub> -20.0MHz		dB		42	50	--
	f <sub>c</sub> +25MHz ...f <sub>c</sub> +200MHz				42	50	--
Passband Ripple (Δα)	F <sub>c</sub> ± 2MHz			dB		1.0	1.5
Frequency Aging Absolute Value during the First Year  fA				ppm/Year			±10
Hold Type		SD		3030 Type L3.0*W3.0*H1.1mm			
Other	Package	T	Tape/Reel				
	RoHS Status	LF	RoHS III compliant				
	Add Value		Blank: N/A				
	Internal Control Code		Blank: N/A				

**SMD SAW FILTER 3030 TYPE SD SERIES**

**TYPICAL FREQUENCY RESPONSE**

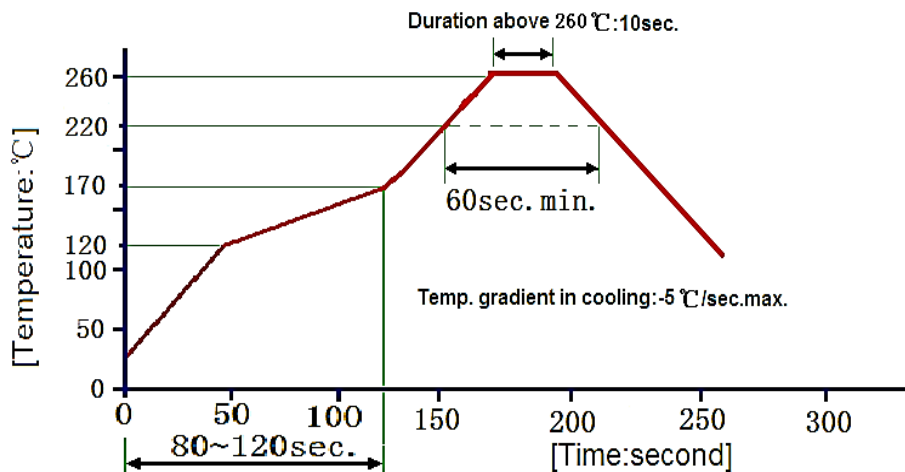


**SMD SAW FILTER 3030 TYPE SD SERIES**

**RELIABILITY**

Test Items	Test Method And Conditions	Requirement
<b>Temperature Storage</b>	(1) Temperature: $85^{\circ}\text{C}\pm 2^{\circ}\text{C}$ , Duration: 250h , Recovery time: $2\text{h}\pm 0.5\text{h}$	It shall remain electrical performance after tests
	(2) Temperature: $-55^{\circ}\text{C}\pm 3^{\circ}\text{C}$ , Duration: 250h ,Recovery time: $2\text{h}\pm 0.5\text{h}$	
<b>Humidity Test</b>	Conditions: $60^{\circ}\text{C}\pm 2^{\circ}\text{C}$ , 90~95% RH      Duration: 250h	
<b>Thermal Shock</b>	Heat cycle conditions: $\text{TA}=-55^{\circ}\text{C}\pm 3^{\circ}\text{C}$ , $\text{TB}=85^{\circ}\text{C}\pm 2^{\circ}\text{C}$ , $t_1=t_2=30\text{min}$ , Switch time: $\leq 3\text{min}$ , Cycle time: 100 times, Recovery time: $2\text{h}\pm 0.5\text{h}$ .	
<b>Vibration Fatigue</b>	Frequency of vibration: 10~55Hz      Amplitude:1.5mm Directions: X,Y and Z      Duration: 2h	
<b>Drop Test</b>	Cycle time: 10 times      Height: 1.0m	
<b>Solderability</b>	Temperature: $245^{\circ}\text{C}\pm 5^{\circ}\text{C}$ Duration: 3.0s--5.0s Depth: DIP--2/3 , SMD--1/5	
<b>Resistance to Soldering Heat</b>	(1)Thickness of PCB:1mm , Solder condition: $260^{\circ}\text{C}\pm 5^{\circ}\text{C}$ , Duration: $10\pm 1\text{s}$	
	(2)Temperature of Soldering Iron: $350^{\circ}\text{C}\pm 10^{\circ}\text{C}$ , Duration: 3~4s , Recovery time : $2 \pm 0.5\text{h}$	

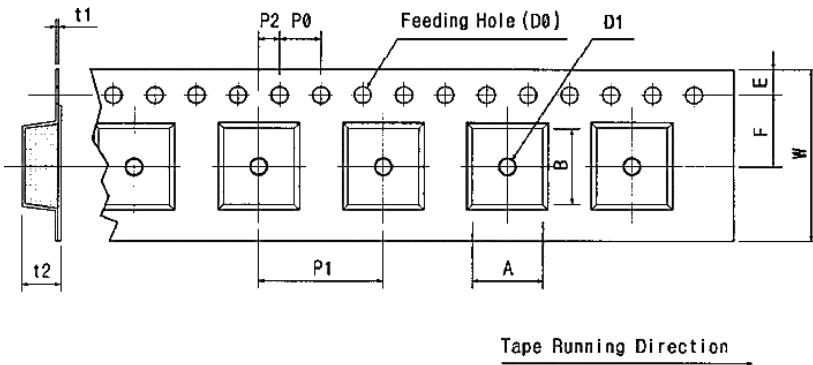
**SUGGESTED REFLOW PROFILE (For Reference Only)**



Reflow cycles: 3 cycles max.

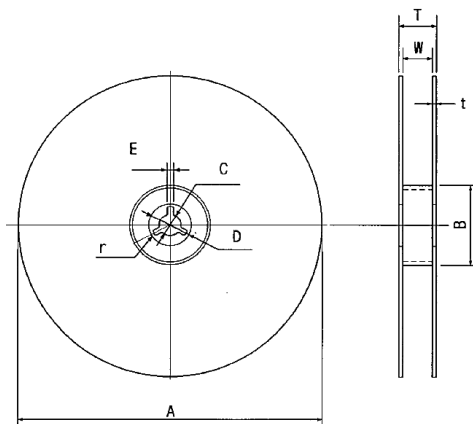
**SMD SAW FILTER 3030 TYPE SD SERIES**

**TAPE DIMENSION (Unit: mm, 1000pcs/Reel)**



Code	Dimension
W	12.0+/-0.30
F	5.50+/-0.10
E	1.75+/-0.10
P 0	4.00+/-0.10
P 1	8.00+/-0.10
P 2	2.00+/-0.10
D 0	Ø1.5+/-0.10
D 1	Ø1.5+/-0.25
t 1	0.30+/-0.01
t 2	1.90+/-0.05
A	3.25+/-0.10
B	3.30+/-0.10

**REEL DIMENSION (Unit: mm)**



Code	Dimension
A	Ø330+/-1.0
B	Ø100+/-0.5
C	Ø13.0+/-0.5
D	Ø21+/-0.8
E	2.00+/-0.5
W	13.0+/-0.50
t	3.00 Max.
r	1.00 Max.

## SMD SAW FILTER 3030 TYPE SD SERIES

### CAUTION

1. The frequency  $f_c$  is defined as the midpoint between the 3dB frequencies.
2. Unless noted otherwise, all measurements are made with the filter installed in the specified test fixture that is connected to a 50Ω test system with  $VSWR \leq 1.2:1$ . The test fixture L and C are adjusted for minimum insertion loss at the filter center frequency,  $f_c$ . Note that insertion loss, bandwidth, and passband shape are dependent on the impedance matching component values and quality.
3. Unless noted otherwise, specifications apply over the entire specified operating temperature range.
4. The specifications of this device are based on the test circuit shown above and subject to change or obsolescence without notice.
5. All equipment designs utilizing this product must be approved by the appropriate government agency prior to manufacture or sale.
6. Our liability is only assumed for the Surface Acoustic Wave (SAW) component(s) per se, not for applications, processes and circuits implemented within components or assemblies.
7. For questions on technology, prices and delivery please contact our sales offices or e-mail [sales@NextGenComponent.com](mailto:sales@NextGenComponent.com).

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