




SPECIFICATION SHEET

SPECIFICATION SHEET NO.	N0521-SA315M0000S001
DATE	May 21, 2021
REVISION	A0
DESCRIPTION	SMD SAW Resonator 5050 Type L5.0*W5.0*H1.35mm 8 Pads S3 Series 315.000KHz, Insertion Loss: 2.2 dB Max. Tolerance: +/-75KHz Operating Temp. Range -40°C ~+85°C Reflow Profile Condition 260 °C Max. Tape/Reel, RoHS/RoHS III compliant
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	TGS SR 315.0MA S3 TLF
PART CODE	SA315M0000S001

VENDOR APPROVE			
Issued/Checked/Approved			
DATE: May 21, 2021			

CUSTOMER APPROVE	
DATE:	

SMD SAW RESONATOR 5050 TYPE S3 SERIES

MAIN FEATURE

- SMD SAW Resonator 5050 Type 8 Pads
- Dimension L5.0*W5.0*H1.35mm
- Reflow Profile Condition 260 °C Max.
- Cross more competitors part
- RoHS/RoHS III compliant



APPLICATION

- Bluetooth, wireless communication set
- Communication Electronics

RFQ
[Request For Quotation](#)

PART CODE GUIDE

SA	315M0000	S	001
1	2	3	4

- 1) SA: Part family Code for SMD SAW Resonator 5050 Type L5.0*W5.0*H1.35mm 8 Pads S3 Series
- 2) 315M0000: Frequency range code for 315.000MHz
- 3) S: SMD type, Package Tape/Reel, 1000pcs/Reel
- 4) 001: Specification code for original part No.: **TGS SR 315.0MA S3 TLF**

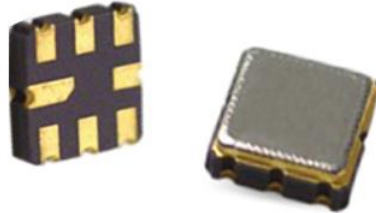
MORE FREQUENCY RANGE AVAILABLE (MHz)

315.00	340.000								

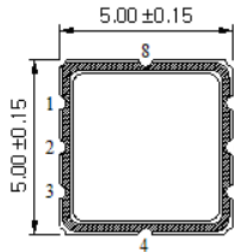
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DIMENSION (Unit: mm, Tol. +/-0.15mm)

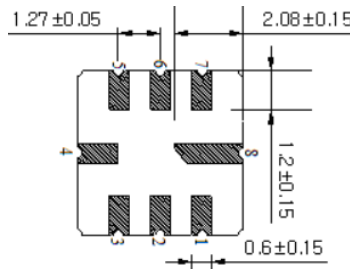
Image for reference



S3



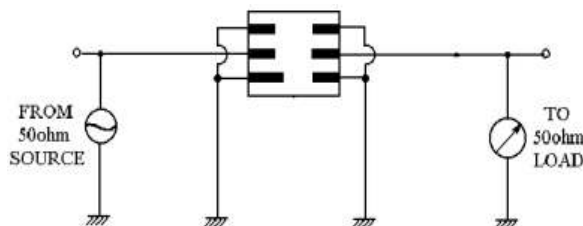
Marking
Frequency Range



Connection
Pin 2: Input
Pin 6: Output
Other pins: Ground



Measuring Circuit



Note:
Test Temperature: 25 °C±2 °C
Terminating Source Impedance: 50Ω
Termination Load Impedance: 50Ω

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ELECTRICAL PARAMETERS

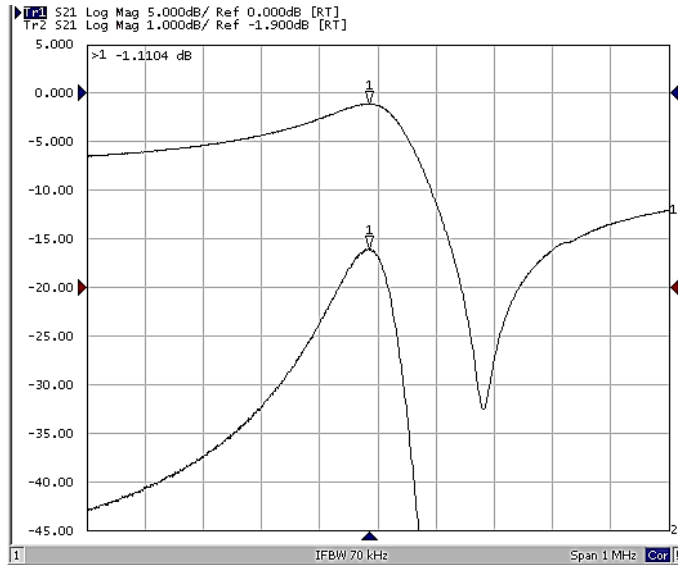
Parameter		Part No. Symbol	Units	Value		
				Min.	Typical	Max.
Original Manufacturer		TGS	TGS Crystals			
Holder Type		SR	SAW Resonator			
Frequency Range (f0)		315.0M	MHz	315.0000		
Frequency Tolerance		A	KHz	-75		+75
Operation Temperance			°C	-40		+85
Storage Temperance			°C	-40		+85
DC Voltage (between any Terminals)			V		5.0	
RF Power (in BW)			dBm		0	
ESD Voltage (HB)			V		400	
Insertion Loss			dB		1.4	2.2
Quality Factor (Q)	Unload				8000	12800
	50 Ω Loaded				1000	2000
Temperature Stability	Turnover Temperature		°C	10	25	40
	Frequency Temperature Coefficient	ppm/°C		0.032		
Aging		ppm/Year		≤±10		
DC Insulation Resistance		MΩ	1.0			
Transduce Static Capacitance		pF		2.13		
Hold Type		S3	5050 Type 8 Pads L5.0*W5.0*H1.35mm			
Other	Package	T	Tape/Reel, 1000pcs/Reel			
	RoHS Status	LF	RoHS III compliant			
	Add Value		Blank: N/A			
	Internal Control Code		Blank: N/A			

Note:

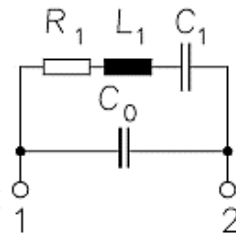
Original Part Number: TGS SR 315.0MA S3 TLF

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FREQUENCY RESPONSE

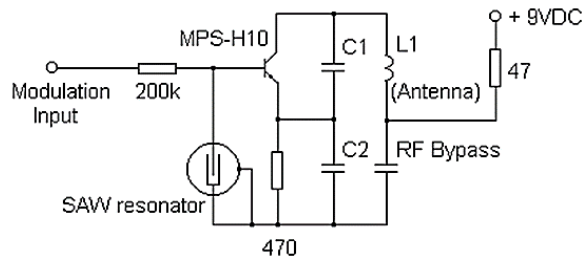


EQUIVALENT LC MODEL

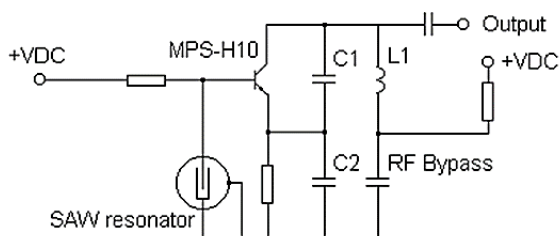


PLICTYPICAL APATION CIRCUITS

Typical Low-power Transmitter Application



Typical Local Oscillator Application

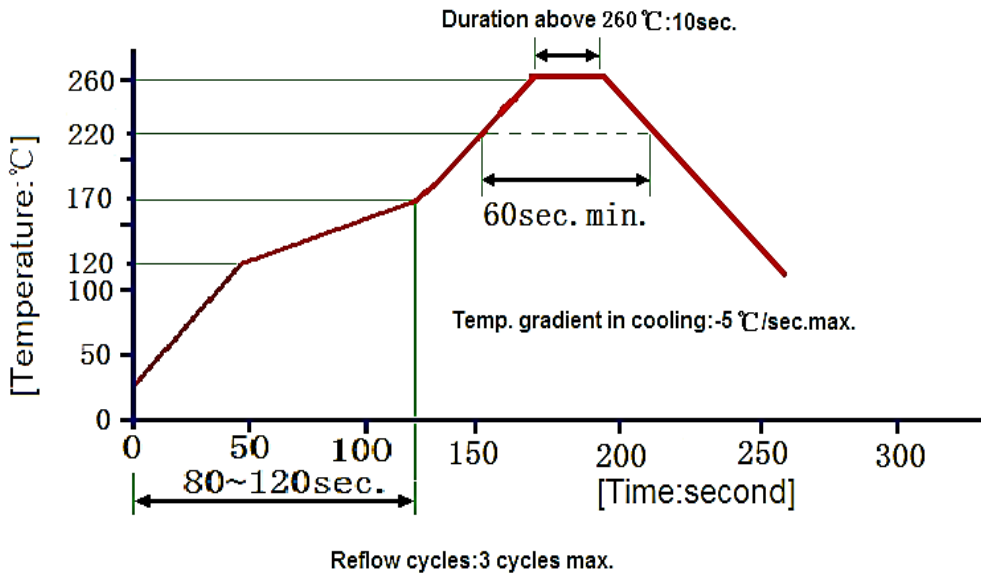


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RELIABILITY

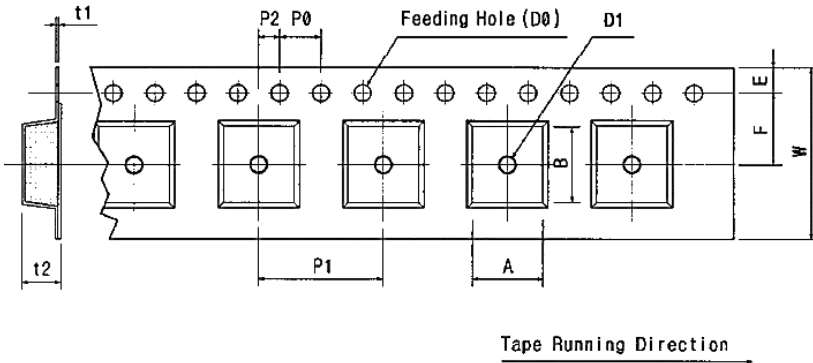
Test Items	Test Method And Conditions	Requirement
Temperature Storage	(1) Temperature: $85^{\circ}\text{C}\pm 2^{\circ}\text{C}$, Duration: 250h , Recovery time: $2\text{h}\pm 0.5\text{h}$ (2) Temperature: $-55^{\circ}\text{C}\pm 3^{\circ}\text{C}$, Duration: 250h ,Recovery time: $2\text{h}\pm 0.5\text{h}$	It shall remain electrical performance after tests
Humidity Test	Conditions: $60^{\circ}\text{C}\pm 2^{\circ}\text{C}$, 90~95% RH Duration: 250h	
Thermal Shock	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: $2\text{h}\pm 0.5\text{h}$.	
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: $245^{\circ}\text{C}\pm 5^{\circ}\text{C}$ Duration: 3.0s--5.0s Depth: DIP--2/3 , SMD--1/5	
Resistance to Soldering Heat	(1)Thickness of PCB:1mm , Solder condition: $260^{\circ}\text{C}\pm 5^{\circ}\text{C}$, 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)



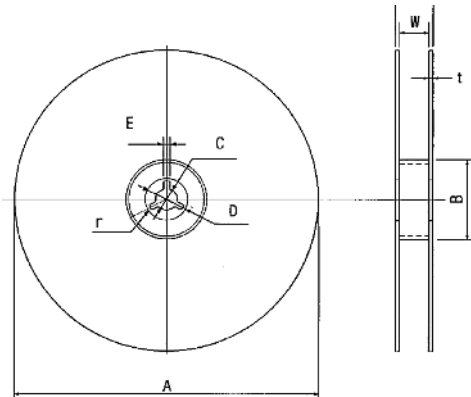
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REEL DIMENSION (Unit: mm, 1000pcs/Reel)

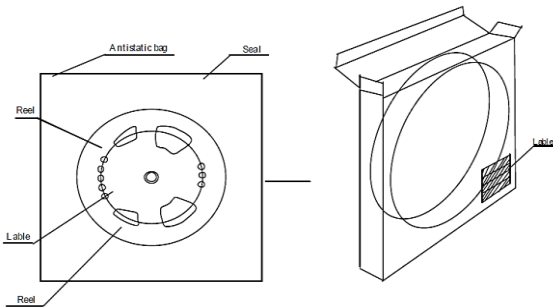


Code	Dimension
W	12.0+/-0.30
F	5.50+/-0.05
E	1.75+/-0.10
P 0	4.00+/-0.10
P 1	8.00+/-0.10
P 2	2.00+/-0.05
D 0	Ø1.5+/-0.10
D 1	Ø1.0+/-0.25
t 1	0.30+/-0.05
t 2	2.10+/-0.10
A	6.40+/-0.10
B	5.20+/-0.10

TAPE WIDE 8MM 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+/-0.30
t	3.00 Max.
r	1.00 Max.



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