NextGen Components, Inc.

PART CODE: CG8M000000S001

SPECIFICATION SHEET

SPECIFICATION SHEET NO.	N0207-CG8M000000S001
DATE	Feb. 07, 2021
REVISION	A0
DESCRIPITION	SMD Ceramic Resonator, 3731 Type, L3.7*W3.1*H1.2mm, Without Built-in Capacitance, 2 pads, CRAV Series 8.000MHz, Frequency Accuracy +/-0.5%, Operating Temp. Range -25°C ~+85°C, Reflow Profile Condition 260 °C Max. RoHS/RoHS III compliant, Tape/Reel
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	TGS CRAV 8.0MT TLF
PART CODE	CG8M000000S001

VENDOR APPROVE			
Issued/Checked/Approved	NextGen Components, Inc. Mandy Xu	NextGen Components, Inc. Ruby Zhang	NextGen Components, Inc. Jack Zhang
DATE: Feb. 07, 2021			

CUSTOMER APPROVE
DATE:

NextGen Components, Inc.

PART CODE: **CG8M000000S001**

SMD CERAMIC RESONATOR CRAV SERIES

MAIN FEATURE

- SMD Ceramic Resonator, L3.7*W3.1*H1.2mm, 2 pads
- Low cost & Without Built-in Capacitance
- Reflow Profile Condition 260 °C Max.
- Wide Frequency Range
- Cross more competitors part
- RoHS III compliant

APPLICATION

- Bluetooth, wireless communication set
- Communication Electronics

RFQ
Request For Quotation

PART CODE GUIDE

CG	8M000000	S	001
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1) CG: Part family Code for SMD Ceramic Resonator, L3.7*W3.1*H1.2mm, 2 pads, CRAV series

2) 8M000000: Frequency range code for 8.00000MHz

3) S: SMD type, Package Tape/Reel, 1000pcs/Reel

4) 001: Specification code for original part No.: **TGS CRAV 8.0MT TLF**

MORE FREQUENCY RANGE AVAILABLE (MHz)

8.000	12.000								

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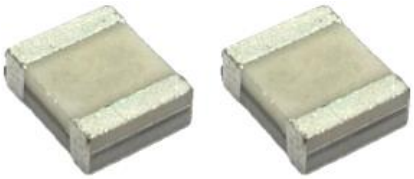
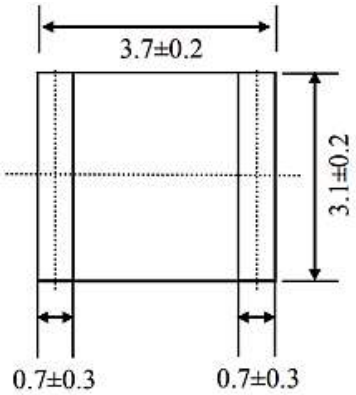
SMD CERAMIC RESONATOR CRAV SERIES

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

Image for reference

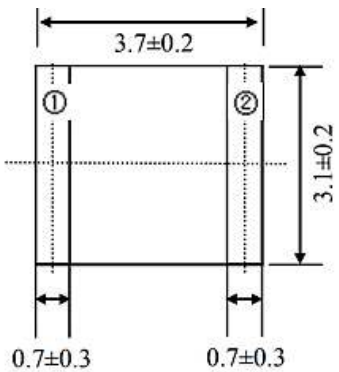


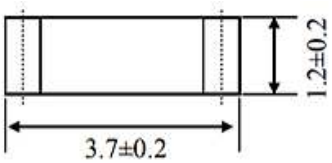
CRAV



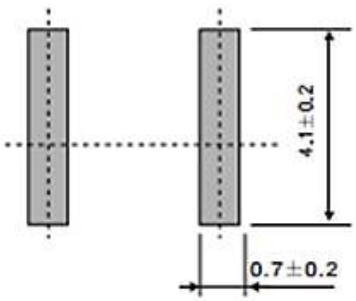
Marking

Line 1: Freq. Range+ QC Code (A~Z)





Recommend Pad Layout



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SMD CERAMIC RESONATOR CRAV SERIES

ELECTRICAL PARAMETERS

Parameter		Part No. Symbol	Units	Value			Condition
				Min.	Typical	Max.	
Original Manufacturer		TGS	TGS Crystals				
Holder Type		CRAV	SMD Ceramic Resonator, L3.7*W3.1*H1.2mm, 2 pads				
Frequency Range		8.0	MHz	8.0			
Withstanding Voltage			V	50			@DC, 1 min
Insulation Resistance			MΩ	500			@AV, 1 min.
Operation Temperance			℃	-25		+85	
Storage Temperance			℃	-55		+85	
Rating Voltage			V	6			DC
				15			p-p
Frequency Accuracy			%	0.5			
Resonant Impedance			Ω			40	
Temperature Coefficient of Oscillation Frequency			%			+/-0.3	Oscillation Frequency drift, -25℃~ +85℃)
Oscillation Frequency Aging Rate (10 years)			%			+/-0.3	From initial value
IC application				1/6TC4069UBP			
Design Mode		MG					
Built-in Capacitance			pF	N/A			
Other	**Package**	T	Tape/Reel				
	RoHS Status	LF	RoHS III compliant				
	Add Value		N/A				
	Internal Control Code *		N/A				

Note: 1) Original Part Number: **TGS CRAV 8.0MT TLF**
2) * Internal Control Code- 2 letter or digits; Blank: N/A

SMD CERAMIC RESONATOR CRAV SERIES

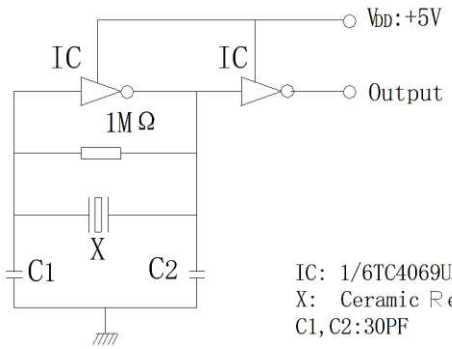
RELIABILITY

Test Items	Test Method And Conditions	Performance Requirements
Humidity	Keep the resonator at 40℃±2℃ and 90%-95% RH for 96h. Then Release the resonator into the room Condition for 1h prior to the Measurement.	It shall fulfill the specifications in Table 1.
High Temperature Exposure	Subject the resonator to -85℃±2℃ for 96h, then release the resonator into the room conditions for 1h prior to the measurement.	It shall fulfill the specifications in Table 1.
Low Temperature Exposure	Subject the resonator to -55℃±2℃ for 96h, then release the resonator into the room conditions for 1h prior to the measurement.	It shall fulfill the specifications in Table 1.
Temperature Cycling	After temperature cycling of blow table was performed 5 times, resonator shall be measured after being placed in natural conditions for 1h. Time: 30 min.@ -25 +/-3℃ ; Time: 30 min. @85 +/-3℃	It shall fulfill the specifications in Table 1.
Vibration	Subject the resonator to vibration for 2h each in x, y and z axis With the amplitude of 1.5mm, the frequency shall be varied uniformly between the limits of 10 Hz—55Hz.	It shall fulfill the specifications in Table 1.
Mechanical Shock	Drop the resonator randomly onto a wooden floor from the height of 100cm 3 times.	It shall fulfill the specifications in Table 1.
Soldering Test	Passed through the re-flow oven under the following condition and left at room temperature for 1h before measurement	It shall fulfill the specifications in Table 1.
Solder Ability	Dipped in 245℃±5℃ solder bath for 3s±0.5 s with rosin flux (25wt% ethanol solution.)	The terminals shall be at least 95% covered by solder.
Board Bending	Mount a glass-epoxy board (Width=40mm,thickness=1.6mm),then bend it to 1mm displacement and keep it for 5s. (See the following figure 1)	Mechanical damage such as breaks shall not occur.

Table 1

Item	Specification after test
Oscillation Frequency Change △Fosc/Fosc (%) max	±0.3
Resonant Impedance (Ω) max	40
The limits in the above table are referenced to the initial measurements.	

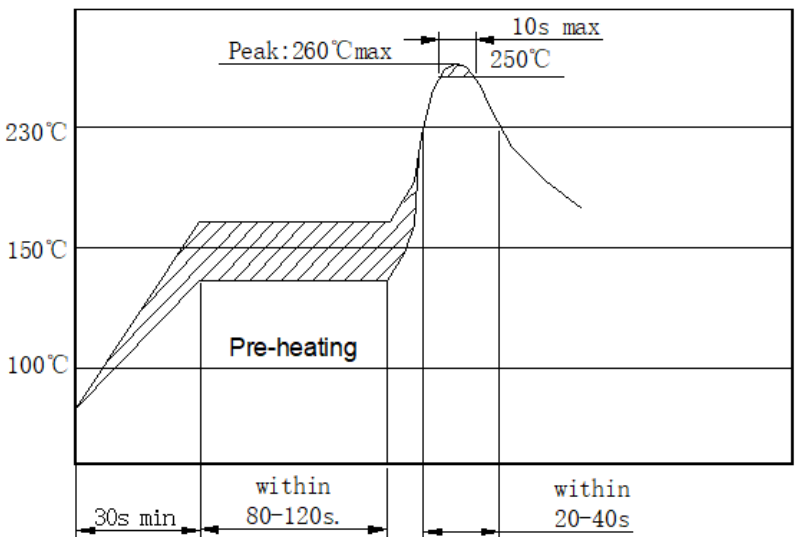
TEST CIRCUIT (For Reference Only)



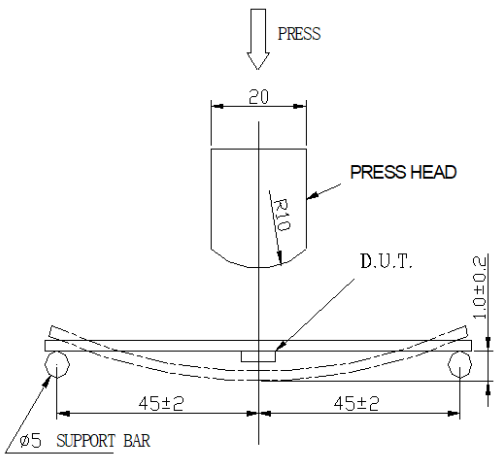
IC: 1/6TC4069UBP×2
X: Ceramic Resonator
C1, C2:30PF

Note:
Parts shall be tested under the condition (Temp.: 20±15℃,Humidity 65±20% R.H.) unless the standard condition(Temp.: 25±3 ℃, Humidity :65±10% R.H.) is regulated to measure.

SUGGESTED REFLOW PROFILE (For Reference Only)

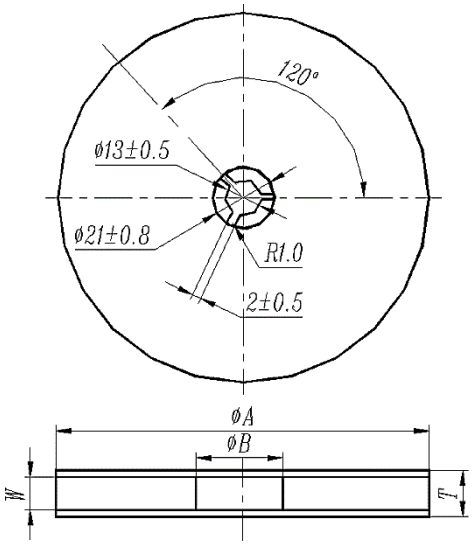


BOARD BENDING TEST- FIGURE 1

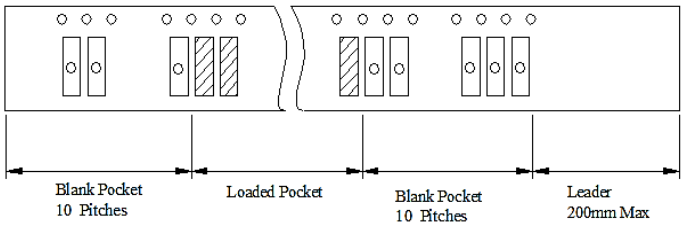


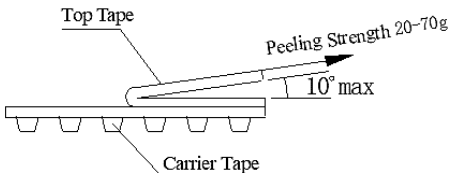
TAPE/REEL (Unit: mm)

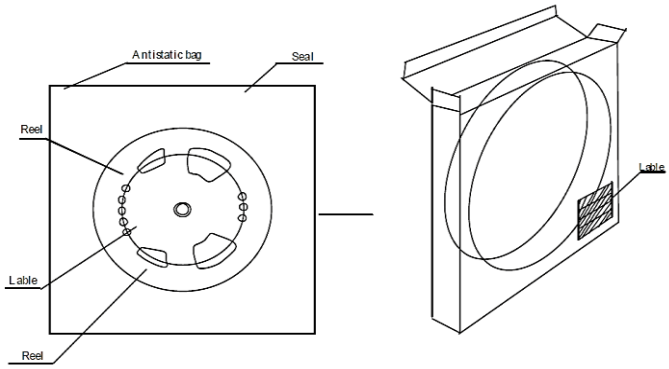
All Devices are packed in accordance with EIA standard RS-481-2 and specifications., 1000pcs/Reel

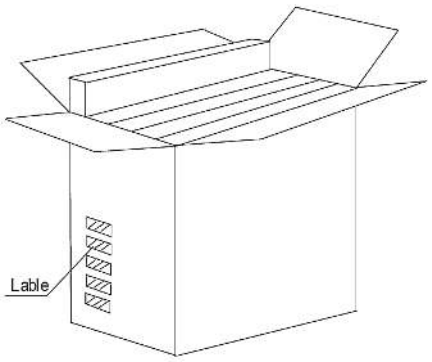


Symbol	Dimension
ϕA	180±3.0
ϕB	60.0 Min.
W	12.4 Min.
T	19.4 Max.









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