PART CODE: **CM24M00000S010**

SPECIFICATION SHEET

SPECIFICATION SHEET NO.	Q0501-CM24M00000S010
DATE	May 01, 2023
REVISION	A0
DESCRIPITION	SMD Ceramic Resonator, 3731 Type, L3.7*W3.1*H1.5mm, Built-in Capacitance, 3 pads, CRTV Series 24.000MHz, 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 CRTV 24.0MX-10 TLF
PART CODE	CM24M00000S010

VENDOR APPROVE
Issued/Checked/Approved NextGen Components, Inc. Mandy Xu NextGen Components, Inc. Ruby Zhang NextGen Components, Inc. Jack Zhang
DATE: May 01, 2023

CUSTOMER APPROVE
DATE:

NextGen Components, Inc. sales@NextGenComponent.com www.NextGenComponent.com

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SMD CERAMIC RESONATOR CRTV SERIES

ELECTRICAL PARAMETERS

Parameter		Part No. Symbol	Units	Value			Condition
				Min.	Typical	Max.	
Original Manufacturer		TGS	TGS Crystals				
Holder Type		CRTV	SMD Ceramic Resonator, L3.7*W3.1*H1.3mm, 3 pads				
Frequency Range		24.0	MHz	24.0			
Withstanding Voltage		MX	V	50			@DC, 1 min
Insulation Resistance			M O	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			O			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				1/6TC74HCU04Px2			
Design Mode							
Built-in Capacitance		-10	pF	10pF (+/-20%)			
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 CRTV 24.0MX-10 TLF**

2) * Internal Control Code- 2 letter or digits; Blank: N/A

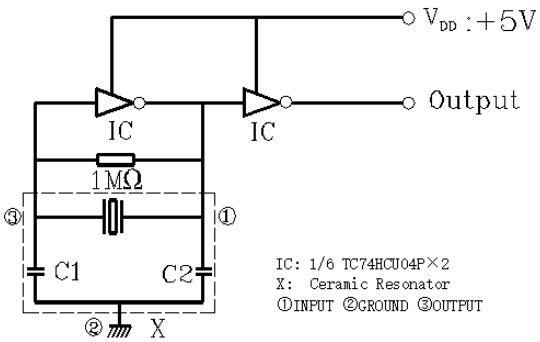
RELIABILITY

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 v 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.	

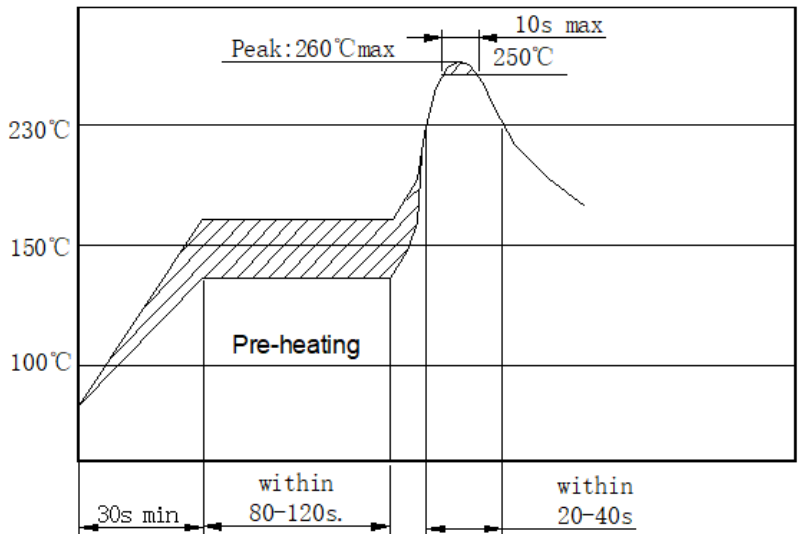
TEST CIRCUIT (For Reference Only)



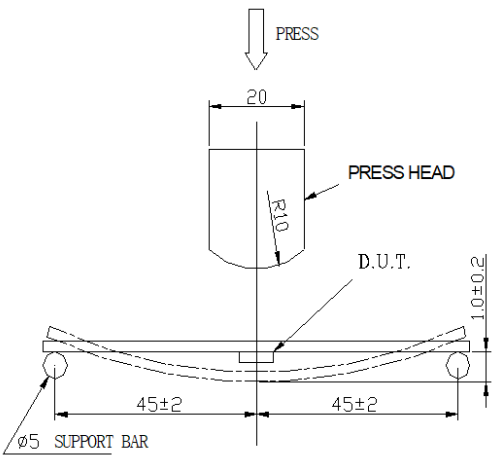
Note:

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)

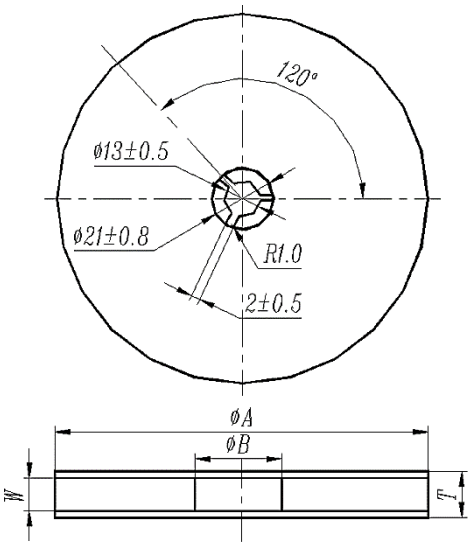


BOARD BENDING TEST- FIGURE 1

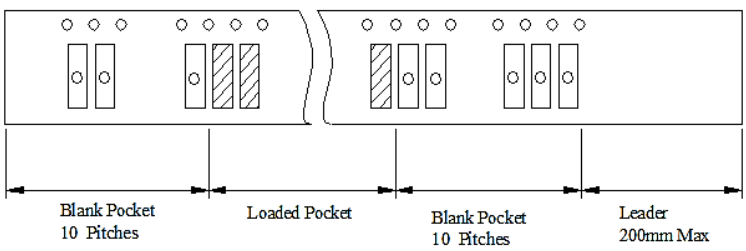


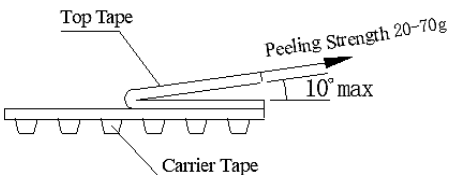
TAPE/REEL (Unit: mm)

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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