



Crystals & Oscillators

PART CODE: **CK3M680000S001**

SPECIFICATION SHEET

SPECIFICATION SHEET NO.	N0810-CK3M680000S001
DATE	Aug. 10, 2021
REVISION	A0
DESCRIPTION	SMD Ceramic Resonator, 7434 Type, L7.4*W3.4*H1.8mm, 3 pads 3.680000MHz, Built-in Capacitance. CRTC Series Frequency Accuracy +/-0.5%, Operating Temp. Range -25°C ~+85°C, Tape/Reel, Reflow Profile Condition 260 °C Max. RoHS/RoHS III compliant, Tape/Reel
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	TGS CRTC 3.68MG TLF
PART CODE	CK3M680000S001

VENDOR APPROVE

Issued/Checked/Approved



DATE: Aug .10, 2021

CUSTOMER APPROVE

DATE:

MHZ SMD CERAMIC RESONATOR CRTC SERIES

MAIN FEATURE

- MHz SMD Ceramic Resonator, L7.4*W3.4*H1.8mm, 3 pads
- Low cost, Built-in load capacitance type.
- Reflow Profile Condition 260 °C Max.
- Cross more competitors part
- RoHS/RoHS III compliant



APPLICATION

- Measurement Instrument
- Communication Electronics

PART CODE GUIDE

RFQ

[Request For Quotation](#)

CK	3M680000	S	001
1	2	3	4

- 1) CK: Part family Code for SMD Ceramic Resonator, L7.4*W3.4*H1.8mm, 3 pads, CRTC series
- 2) 3M680000: Frequency range code for 3.68000MHz
- 3) S: SMD type, Package Tape/Reel, 4000pcs/Reel
- 4) 001 Specification code for original Part No. **TGS CRTC 3.68MG TLF**

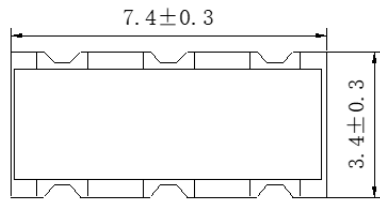
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DIMENSION (Unit: mm)

Image for reference

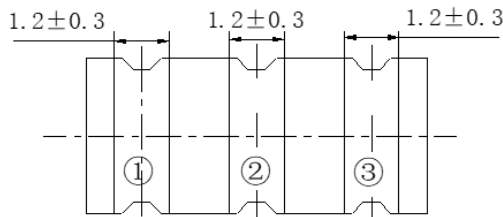


CRTC



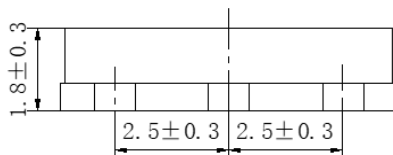
Marking

Frequency Range

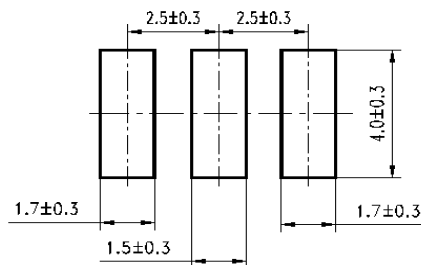


Connection


① Input ② Ground ③ Output




Recommend Pad Layout



**MHZ SMD CERAMIC RESONATOR CRTC SERIES****ELECTRICAL PARAMETERS**

Parameter	Part No. Symbol	Units	Value			Condition
			Min.	Typical	Max.	
Original Manufacturer	TGS	TGS Crystals				
Holder Type	CRTC	SMD Ceramic Resonator, L7.4*W3.4*H1.8mm, 3 pads,				
Frequency Range	3.68	MHz	3.680			
Withstanding Voltage	MG	V	50			@DC, 1 min
Insulation Resistance		MΩ	100			@AV, 1 min.
Operation Temperature		°C	-25		+85	
Storage Temperature		°C	-55		+85	
Rating Voltage		V	6			DC
			15			p-p
Frequency Accuracy		%	0.5			
Resonant Impedance		Ω			30	
Temperature Coefficient of Oscillation Frequency		%			+/-0.3	Oscillation Frequency drift, -25°C ~ +85°C)
Oscillation Frequency Aging Rate (10 years)		%			+/-0.3	From initial value
IC application		1/6TC4069UBPx2				
Design Mode		-	-			
Built-in Capacitance		pF	30			
Others	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 CRTC 3.68MG TLF**2)  Internal Control Code- 2 letter or digits; Blank: N/A

**MHZ SMD CERAMIC RESONATOR CRTC SERIES****RELIABILITY**

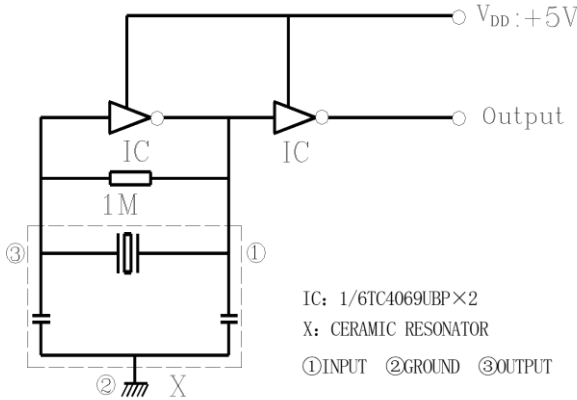
Test Items	Test Method And Conditions	Performance Requirements
Humidity	Keep the resonator at 40°C±2°C and 90%-95% RH for 96h. Then Release the resonator into the room Condition for 1h prior to the Measurement.	It shall fulfill the specifications in Table 1.
High Temperature Exposure	Subject the resonator to -85°C±2°C 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°C±2°C 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°C ; Time: 30 min. @85 +/--3°C	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°C±5°C 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 $\Delta F_{osc}/F_{osc}$ (%) max	±0.3
Resonant Impedance (Ω) max	30
The limits in the above table are referenced to the initial measurements.	

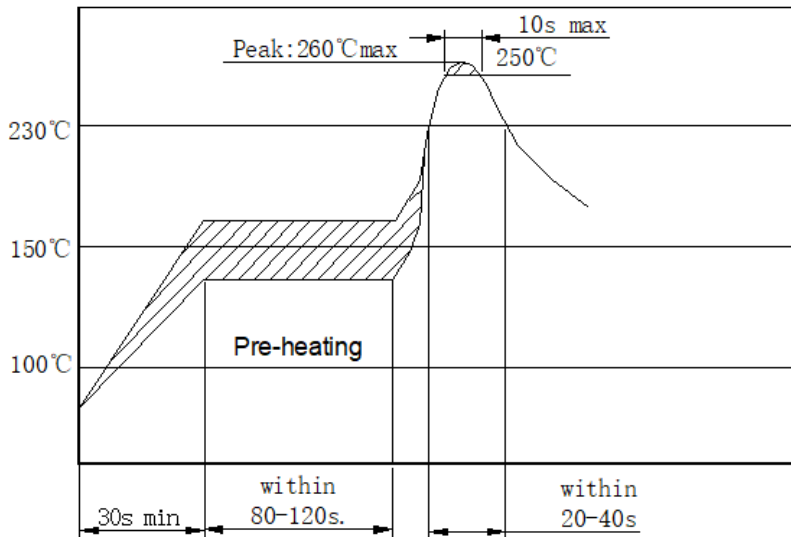
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TEST CIRCUIT (For Reference Only)

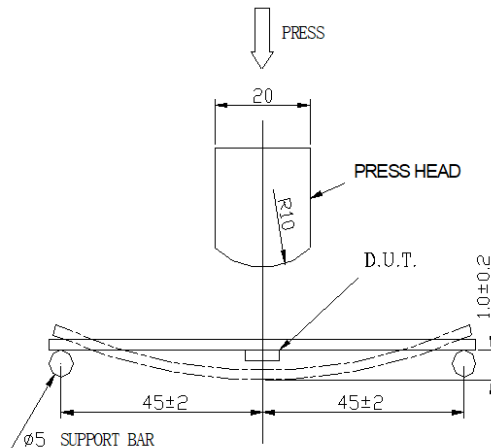


Note:
 Parts shall be tested under the condition
 (Temp.: 20±15°C, Humidity 65±20% R.H.)
 unless the standard condition (Temp.:
 25±3 °C, Humidity :65±10% R.H.) is
 regulated to measure.

SUGGESTED REFLOW PROFILE (For Reference Only)



BOARD BENDING TEST- FIGURE 1





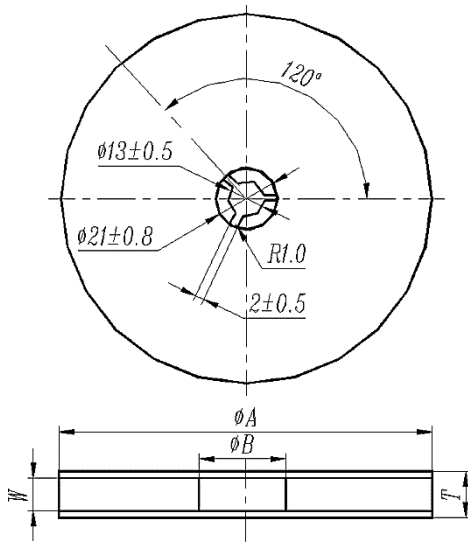
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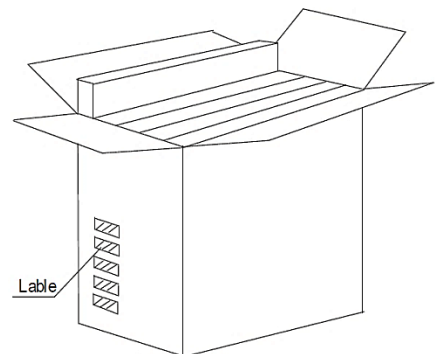
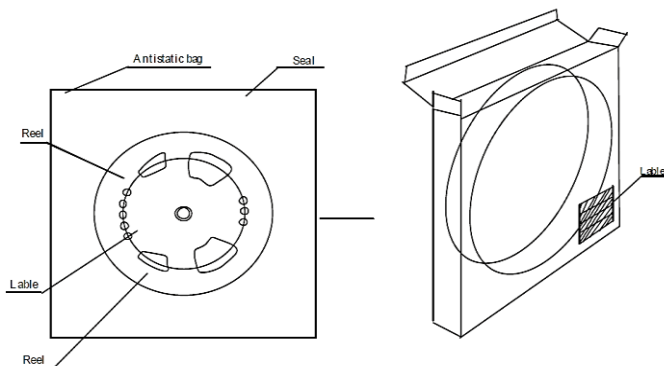
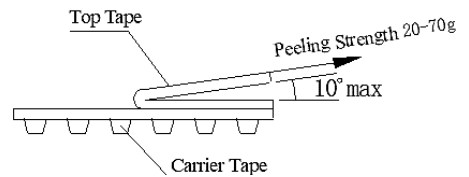
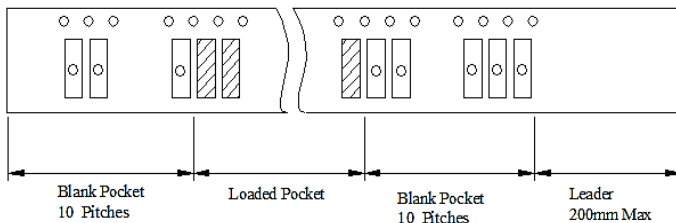
MHZ SMD CERAMIC RESONATOR CRTC SERIES

TAPE/REEL (Unit: mm)

All Devices are packed in accordance with EIA standard RS-481-2 and specifications. 4000pcs/Reel



Symbol	Dimension
φA	330±3.0
φB	80.0 Min.
W	16.4 Min.
T	22.4 Max.



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