




SPECIFICATION SHEET NO.	R1001- CK3M680000S030	
ORIGINAL MFG/PART NO	TGS Crystals/CRTC 3.68MG TLH/ZTTCC 3.68MG	
DATE	Oct. 01, 2024	
REVISION	A2	Updated With Most Recent Data
DESCRIPTION AND MAIN PARAMETRICS	<p>SMD Ceramic Resonator, 7434 Type, L7.4*W3.4*H1.8mm, 3 pads 3.68MHz, Built in Capacitor 30pF Frequency Accuracy $\pm 0.5\%$; Resonant Impedance: 30Ω Max. Operating Temp. Range -25°C ~+85°C Reflow Profile Condition 260 °C Max. Package in Tape/Reel, 4000pcs/Reel REACH/RoHS/RoHS III Compliant, RoHS Annex III lead Exemption (exempt per RoHS EU 2015/863)</p>	
CUSTOMER		
CUSTOMER PART NUMBER		
CROSS REF. PART NUMBER		
MEMO		

VENDOR APPROVE			
Issued/Checked/Approved			
Date: Oct. 01, 2024			

CUSTOMER APPROVE	
Date:	

MAIN FEATURE

- MHz SMD Ceramic Resonator, L7.4*W3.4*H1.8mm, 3 pads
- Low Cost And Short Lead Time
- Built-in Load Capacitance Type.
- For IC Type 1/6TC4069UBPX2
- Offer Quality Alternatives Parts For Major Brand and more
- Moisture Sensitivity Level (MSL) 1 (Unlimited)
- REACH/RoHS/RoHS III Compliant, RoHS Annex III lead Exemption (exempt per RoHS EU 2015/863)



MAIN APPLICATION

- Measurement Instrument
- Communication Electronics

ELECTRICAL CHARACTERISTICS

- See Page 3 ~ Page 4 For Different Part Number.

PRODUCT IMAGE - FOR REFERENCE

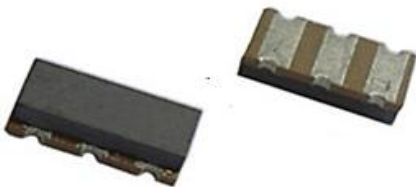


Image shown is a representation only. Exact specifications should be obtained from the product dimension.

HOW TO ORDER

Please follow up part number guide and indicate NextGen part code when you order or RFQ.

RFQ
Request For Quotation

PART CODE GUIDE

CODE	NAME	KEY SPECIFICATION OPTION
CK	Product Index	MHZ SMD Ceramic Resonator Size 7434 L7.4*W3.4*H1.8mm, 3 Pads
3M68	Frequency Range	3M68: 3.68MHz; 4M0: 4MHz; 4M91: 4.91MHz; 8M0: 8MHz
0000	Internal Control Code	Internal Control Code, Letter A~Z, a~z or digits (0~9)
S	SMD Type	Package in Tape/Reel, 4000pcs/Reel
030	Capacitor Value	030: Built in Capacitor 30pF
-XX	Suffix	Blank: N/A XX: Internal Control Code, Letter A~Z, a~z or digits (0~9) for Special/Custom Parameters

AVAILABLE PART CODE

PART CODE	ORIGINAL PART NUMBER	FREQUENCY RANGE	INSULATION RESISTANCE
CK3M680000S030	CRTC3.68MGTLH/ZTTCC3.68MG	3.68MHz	100MΩ Min.@100V, 1 min.
CK4M000000S030	CRTC4.0MGTLH/ZTTCC4.0MG	4.00MHz	100MΩ Min.@10V, 1 min.
CK4M910000S030	CRTC4.91MGTLH/ZTTCC4.91MG	4.91MHz	100MΩ Min.@100V, 1 min.
CK8M000000S030	CRTC8.0MGTLH/ZTTCC8.0MG	8.00MHz	500MΩ Min.@10V, 1 min.

GENERAL ELECTRICAL PARAMETERS – FOR DIFFERENT PART CODE- Ta = 25°C

- RATING

PARAMETER	UNITS	VALUE			CONDITION
		MIN.	TYPICAL	MAX.	
Withstanding Voltage	V		50		@DC, 1 min
Operation Temperature Range	°C	-25		+85	
Storage Temperature Range	°C	-55		+85	
Rating Voltage	V	6V DC			
		15V p-p			

- ELECTRICAL PARAMETERS

PARAMETER	UNITS	VALUE			CONDITION
		MIN.	TYPICAL	MAX.	
Frequency Accuracy	%	±0.5%			
Resonant Impedance	Ω			30	
Temperature Coefficient of Oscillation Frequency	%			± 0.3	@ Oscillation Frequency drift, -25°C ~ +85°C
Aging Rate From Initial Value *	%			± 0.3	For 10 Years
Built-in Capacitance	pF	30			

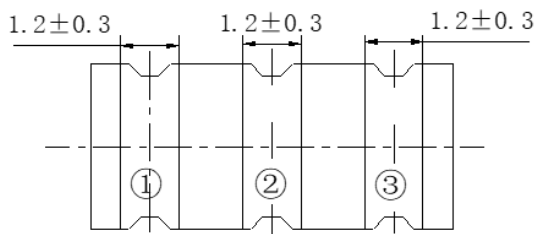
Note: * Components shall be left in a chamber of +85±2°C for 1000 hours, then measured after leaving in natural condition for 1 hours.

DIMENSION (Unit: mm)



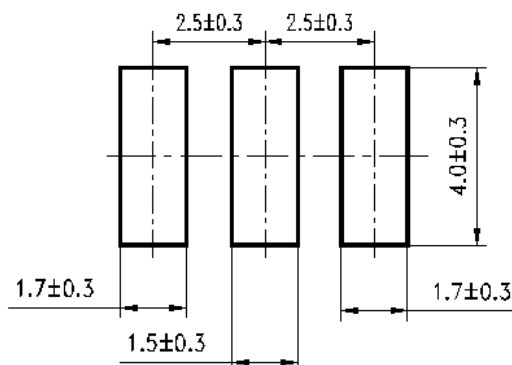
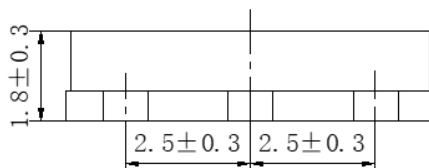
Marking

Frequency Range



Connection

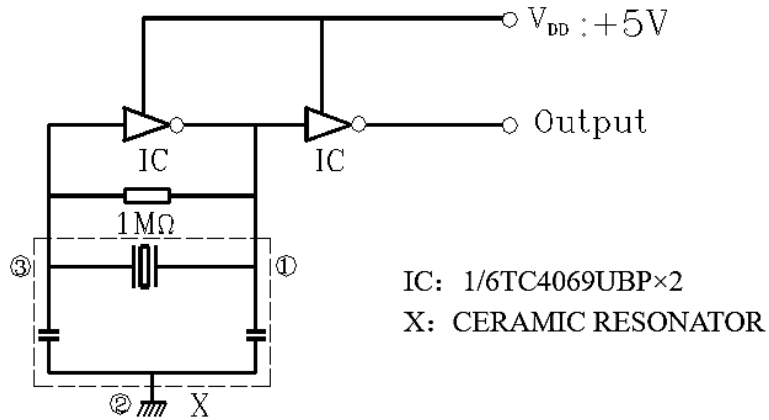
- ① Input
- ② Ground
- ③ Output



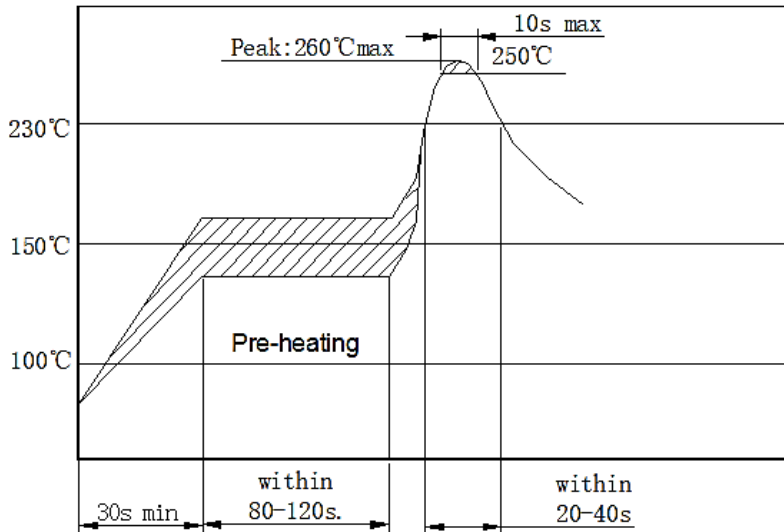
Recommend Pad Layout

TEST CIRCUIT (For Reference Only)

Measurement Conditions: 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)



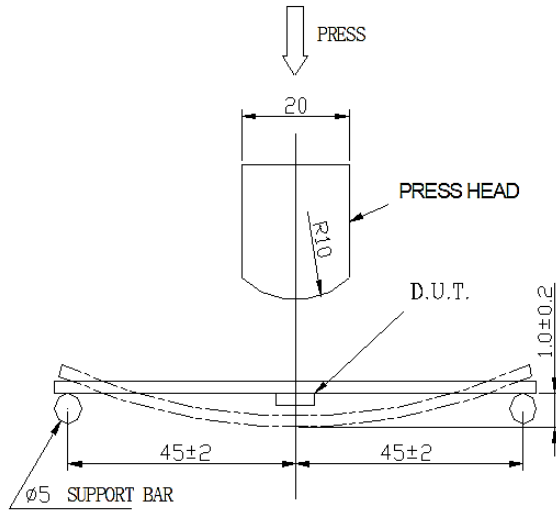
PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

TEST ITEMS	TEST METHOD AND CONDITIONS	PERFORMANCE REQUIREMENTS
Humidity	Keep the resonator at 40°C±2°C and 90%-95% RH for 96h±4h. Then Release the resonator into the room Condition for 1h prior to the Measurement.	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. Temperature at the surface of the substrat Preheat 150°C±5°C: 60s±10 s Peak 260°C±5°C: 10s±3 s	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
High Temperature Exposure	Subject the resonator to 85°C±5°C for 96s, 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 -25°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	Subject the resonator to -40°C for 30 min. followed by a high temperature of 85°C for 30 min. Cycling shall be repeated 5 times with a transfer time of 15s. At the room temperature for 1h prior to the measurement.	It shall fulfill the specifications in Table 1.
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

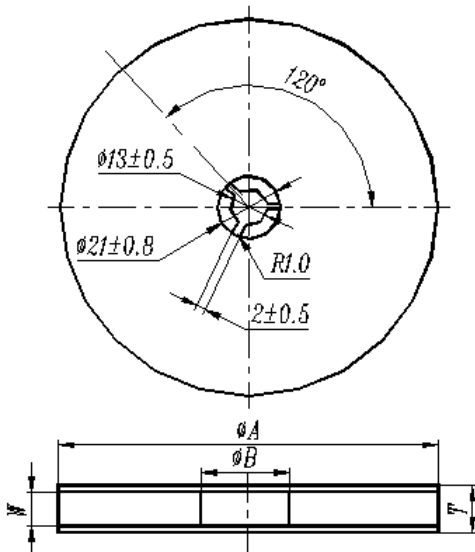
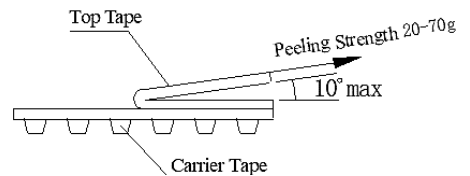
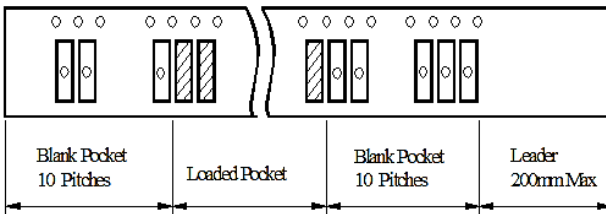
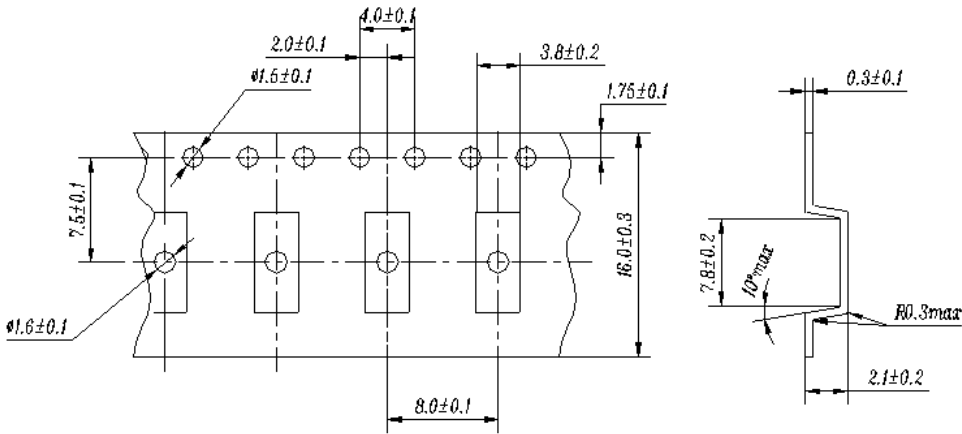
ITEM	SPECIFICATION AFTER TEST
Oscillation Frequency Change $\Delta F_{osc}/F_{osc}$	$\pm 0.3\%$ Max.
Resonant Impedance	35 Ω Max
The limits in the above table are referenced to the initial measurements.	

Figure 1



TAPE/REEL (Unit: mm)

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



Item	Dimension
ϕA	330 ± 3.0
ϕB	80.0 Min.
W	16.4 Min.
T	22.4 Max.
Carrier Tape	16
Qty. per Reel	4000 pcs

IMPORTANT NOTES AND DISCLAIMER

1. **ROHS COMPLIANCE:** The levels of RoHS restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU RoHS Directive (EU) 2015/863 EC (RoHS3). RoHS Test Report for this product can be obtained at Download Center.
2. **REACH COMPLIANCE:** REACH substances of high concern (SVHCs) information is available for this product. Since the European Chemical Agency (ECHA) has published notice of their intent to frequently revise the SVHC listing for the foreseeable future, REACH Test Report for this product can be obtained at Download Center.
3. All Product parametric performance is indicated in the Electrical Characteristics for the listed herein test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.
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