

## 泰晶科技股份有限公司

## CRYSTAL SPECIFICATION

Customer	:	
Customer P/N	:	
TKD P/N	:	CS20M008000PB1
Part Name	:	SMD 5032 CRYSTAL
Product Description	:	8.000000MHZ
Issue Date	:	2023/02/10

## CUSTOMER'S APPROVAL

#### (PLEASE RETURN A COPY WITH APPOVAL)

TKD SCIENCE AND TECHNOLOGY CO., LTD

# 泰晶科技股份有限公司

APPROVED	DESIGNER	
Zhong Yuanhua	Wang Hua	
SALES : TEL :027-65521387 FAX : 027-6	5521932 Mail : whtkd@sztkd.com	
Q C D :TEL:0722-3308397 FAX :0722	-3309768 Mail : tkdqc1@sztkd.com	



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REV.	Description of Revision History	Date	Designer	Checked By
А	New revision	2022/03/18	Dai Wei	Wang Pan
В	PRODUCT IDENTIFICATION	2022/04/26	Dai Wei	Wang Pan
	(MARKING)			
С	TKD P/N	2023/02/10	Wang Hua	Wang Pan



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## **CRYSTAL SPECIFICATION**

- 1. Description: SMD 5032 CRYSTAL
- 2. Nominal Frequency: 8.00000MHz

#### ■ ELECTRICAL SPECIFICATIONS:

NO	Parameter	Min.	Тур.	Max.	Units	Test Condition
1-1	Nominal Frequency	8.0	00000		MHz	
1-2	Frequency Tolerance.	-10		+10	ppm	at 25℃+/-2℃
1-3	Operating Temperature range	-40		+85	°C	
1-4	Storage Temperature range	-55		+125	°C	
1-5	Temperature Characteristics	-30		+30	ppm	-40℃ to +85℃
1-6	Nominal Load Capacitance		18	1	pF	
1-7	Series Resistance			100	Ω	
1-8	Shunt Capacitance			5	pF	
1-9	Motion Capacitance				fF	
1-10	Motion Inductance				mH	
1-11	Q factor				K	
1-12	Spurious Response				dB	
1-13	Frequency Pull ability				ppm/pF	
1-14	C0/C1 Ratio					
1-15	Aging	-3		+3	ppm/ye	
					ar	
1-16	Insulation Resistance	500MΩ	Min. @ [	DC100V		
1-17	Nominal Drive Level		10		μ <b>ω</b>	into 30Ω
1-18	Dependency Condition				μ <b>W</b>	
1-19	Drive Level				Ω	
	Dependency Resistance Max. Minus Min.					
1-20	Drive Level Dependency				ppm	

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	Frequency	Max.			
	Minus Min.				
1-21	Drive I	Level		Ω	
	Dependency				
	Resistance Max.				

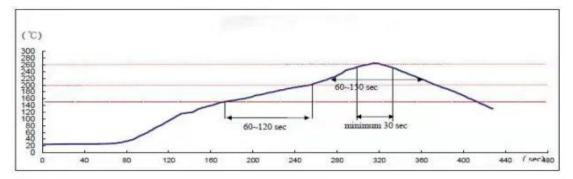
#### ■ CUSTOMER SPECIAL REQUIREMENT

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#### ENVIRONMENTAL

NO	Parameter	Reference Std.	Test Condition
3-1	Vibration Test	MIL-STD-883 2007 Condition A	10~2000Hz, 1.52mm, 20g, each axis
3-1	VIDIALION TEST	JESD22-B103 Condition 1	for 4 hrs
3-2	Thermal Shock	MIL-STD-883 1010 Condition B	-55 $^\circ\!\!\!\mathrm{C}$ , +125 $^\circ\!\!\!\mathrm{C}$ ; soak time is 10 mins,
3-2		JESD22-A104 Condition B	with total 200 cycles
3-3	Mechanical Shock	MIL-STD-883 2002 Condition B	1500g half-sine, 0.5ms, each axis for 3
5-5 Wechan		JESD22-B104 Condition B	times.

#### ■ RECOMMENDED IR REFLOW PROFILE



Reference Standard: JEDEC-STD 020

Test conditions: Pre-heating : 150°C to 200°C, 60~120secs.

Heating: 217°C, 60~150sec.

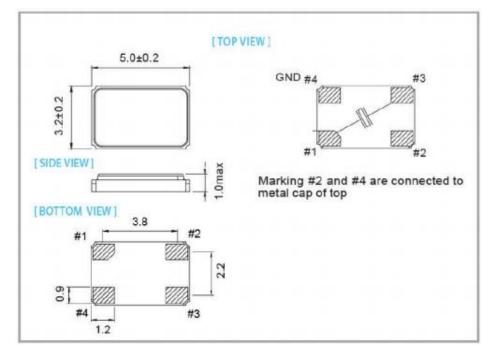
Peak temperature at least : 260°C, The time above 255 °C : minimum 30sec.

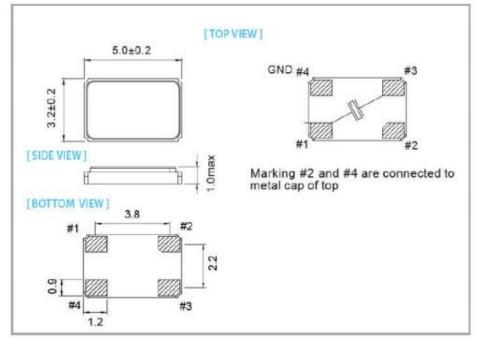


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# ■ PRODUCT DIMENSIONS

DIMENSIONS



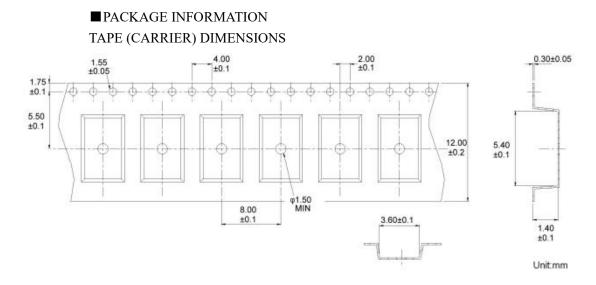


■ PRODUCT IDENTIFICATION (MARKING)

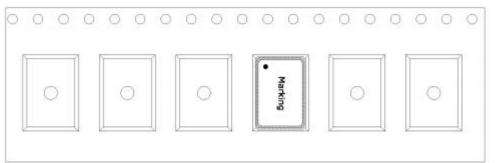




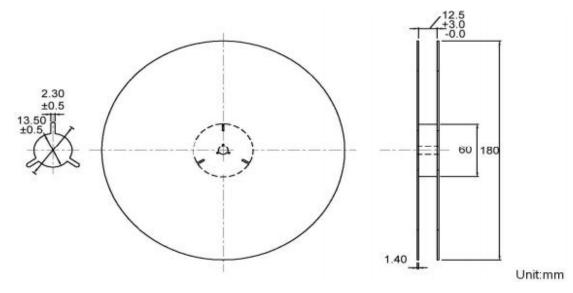
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THE DIRECTION OF PACKING



#### **REEL DIMENSIONS**



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### **Handling Instructions**

#### 1. Cautions for Handling

Prevention against electrostatic breakdown

Your full attention to static electricity is still requested.

#### 2. Prevention against Vibration and Shock

While the product is being transported or mounted onto board, if undue shock and vibration exceeding the specification is put on, there is risk that the built-in crystal blank is broken.

When undue shock and vibration exceeding the specification is put on

the product, please be sure to make confirmation of the product's characteristics.

#### 3. Soldering

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In order to assure the reliability of the crystal oscillator, please use the product under the recommended conditions.

#### 4. Surface mounting

a)This product is surface-mounting device.

So, Please pay attention to the following things.

b)Extreme deformation of board may make pattern off, the electrode of terminals off and solder broken. Full attention is requested especially when splitting the board with the oscillator mounted where the camber of the board occurs.

c)In case that automatic mounter is used, please choose the type with small shock generation and make confirmation of the shock before use.

#### 5. Cleaning

Because cleaning will cause change to all characteristics, cleaning is forbidden.

#### 6. Store keeping (method and duration)

Long-time storage in the high/low temperature and high humidity leads to deterioration of solderability. So, please keep the product in the temperature of +5~+35 and humidity of 45~70%.

Moreover, please keep the product in the circumstance with measures against static electricity.

The storage life is 6 months before the pack is opened and please use it within 168 hours after the pack is opened.

(Please keep it with desiccator etc. when you exceed 168 hours after the bag is opened. Please use it after confirming the product solderability.)