

深圳市炬烜科技有限公司
CHIP SUN TECHNOLOGY CO., LTD

**APPROVAL
SHEET**



CUSTOMER: _____
DESCRIPTION: SMD7*1.5 32.768KHz Quartz Crystal Resonator
MANUFACTURER PART NO.: FTX32.768K7SM7-20DEW
CUSTOMER PART NO: _____
USED IN MODEL: _____
REVISION A1

承 认 APPROVAL		
工程部 TECHNOLOGY DEPT.	品质部 QUALITY DEPT.	采购部 PURCHASING DEPT.

Date: June 2, 2022



深圳市炬烜科技有限公司

CHIP SUN TECHNOLOGY CO., LTD

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<u>Rev</u>	<u>Revise page</u>	<u>Revise contents</u>	<u>Date</u>	<u>Ref.No.</u>	<u>Reviser</u>
A1	ALL	Initial released	2022.5.19	N/A	DavidJiang

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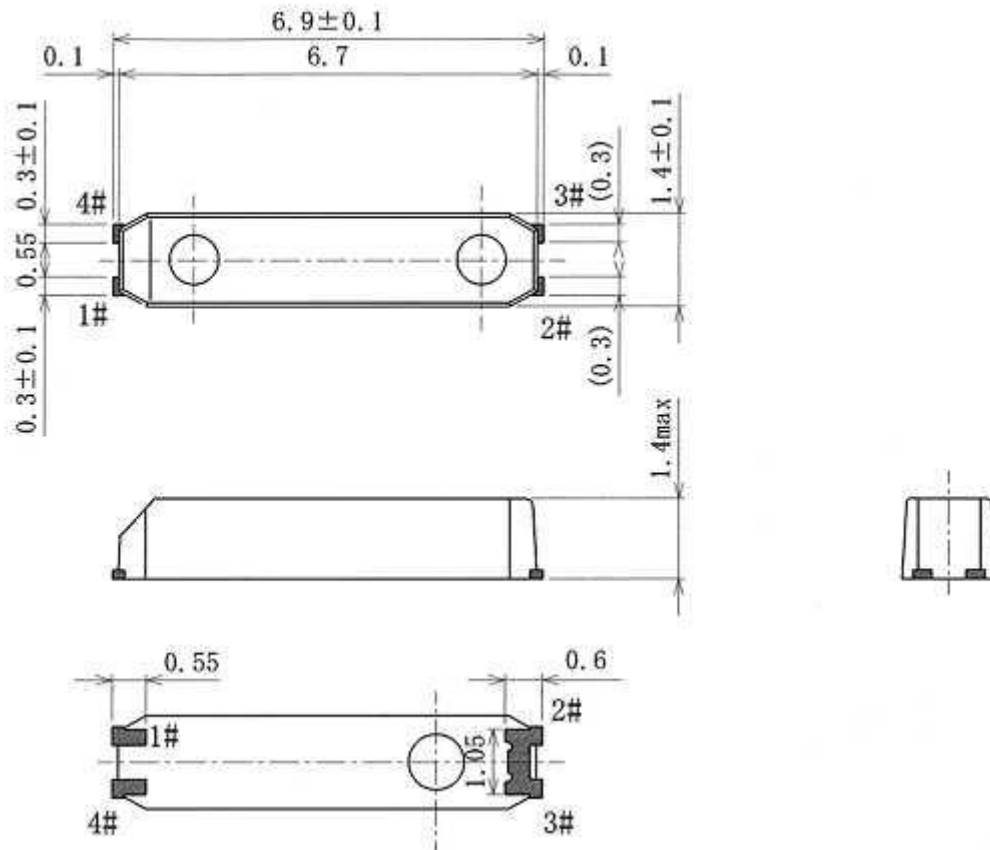
1. QUARTZ CRYSTAL UNIT SPECIFICATION

Parameter	Specification
1.1 Frequency:	32.768KHz
1.2 Holder type:	SMD7×1.5×1.4mm
1.3 Frequency tolerance:	±20ppm at 25°C
1.4 Equivalent resistance:	65Kohms Max
1.5 Operating temperature range:	-40°C To +85°C
1.6 Storage temperature range:	-55°C To +125°C
1.7 Temperature Coefficient:	-0.04×10 ⁻⁶ / °C ² max
1.8 Turn-over temperature::	+25°C±5°C
1.9 Loading capacitance (CL):	7pF
1.10 Drive level:	1.0uW max
1.11 Shunt Capacitance:	0.8pF Typical
1.12 Motional Capacitance:	1.9fF Typical
1.13 Q-value	40K min
1.13 Insulation resistance:	More than 500M ohms
1.14 Aging:	±3 ppm/Year Max (+25°C First Year)
1.15 Reflow Profile	+260°C(IR Reflow 5 Sec Max)
1.16 Dimensions and marking:	Refer to page.3
1.17 Emboss carrier tape & reel:	Refer to page.4
1.18 Note	

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2. DIMENSIONS (Unit: mm)



※Do not connect #2 and #3 to external device.

Marking

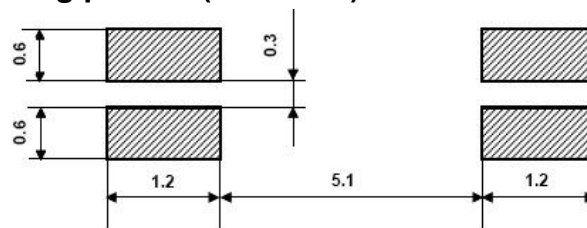
*Marking should be printed as following:

Logo, Nominal Frequency

*Manufacturing Logo: T

*Nominal frequency : 32 (32 → 32.768KHz)

Recommended soldering pattern (Unit: mm)



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a.) Storage condition

Temperature: -55deg.C To +125deg.C

Relative Humidity: 80% Max.

b.) Standard packing quantity

9,000PCS / REEL

c.) Material of the tape

Tape	Material
Carrier tape	PS
Top tape	HIPS

d.) Label contents

.The type of product

.Our specification No.

.Your Part No.

.Lot No.

.Nominal Frequency

.Quantity

.Our Company Name

Sticks label for every reel.

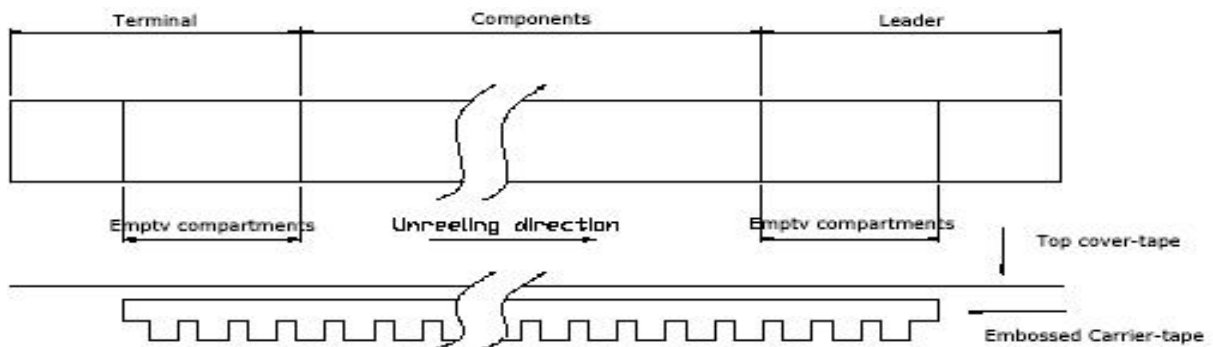
PART NUMBER	
Lot. NO:	
HOLDER TYPE	
FREQUENCY	
REMAKS	
QUANTITY	
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e.) Taping dimension

Leader	Cover-tape	The length of cover-tape in the leader is more than 400 mm including empty embossed area.
	Carrier-tape	After all products were packaged, must remain more than twenty pieces or 400 mm empty area, which should be sealed by cover-tape.
Terminal	Cover-tape	The tip of cover-tape shall be fixed temporary by paper tape and roll around the core of reel one round.
	Carrier-tape	The empty embossed area which are sealed by top cover-tape must remain more the 40 mm.



f.) Joint of tape

The carrier-tape and top cover-tape should not be jointed.

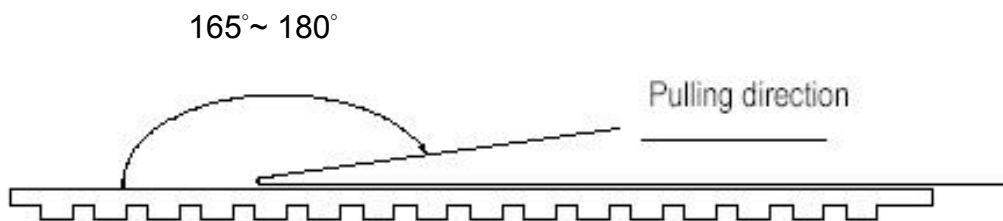
g.) Release strength of cover tape

It has to between 0.1N to 0.7N under following condition.

Pulling direction 165° to 180°

Speed 300mm/min.

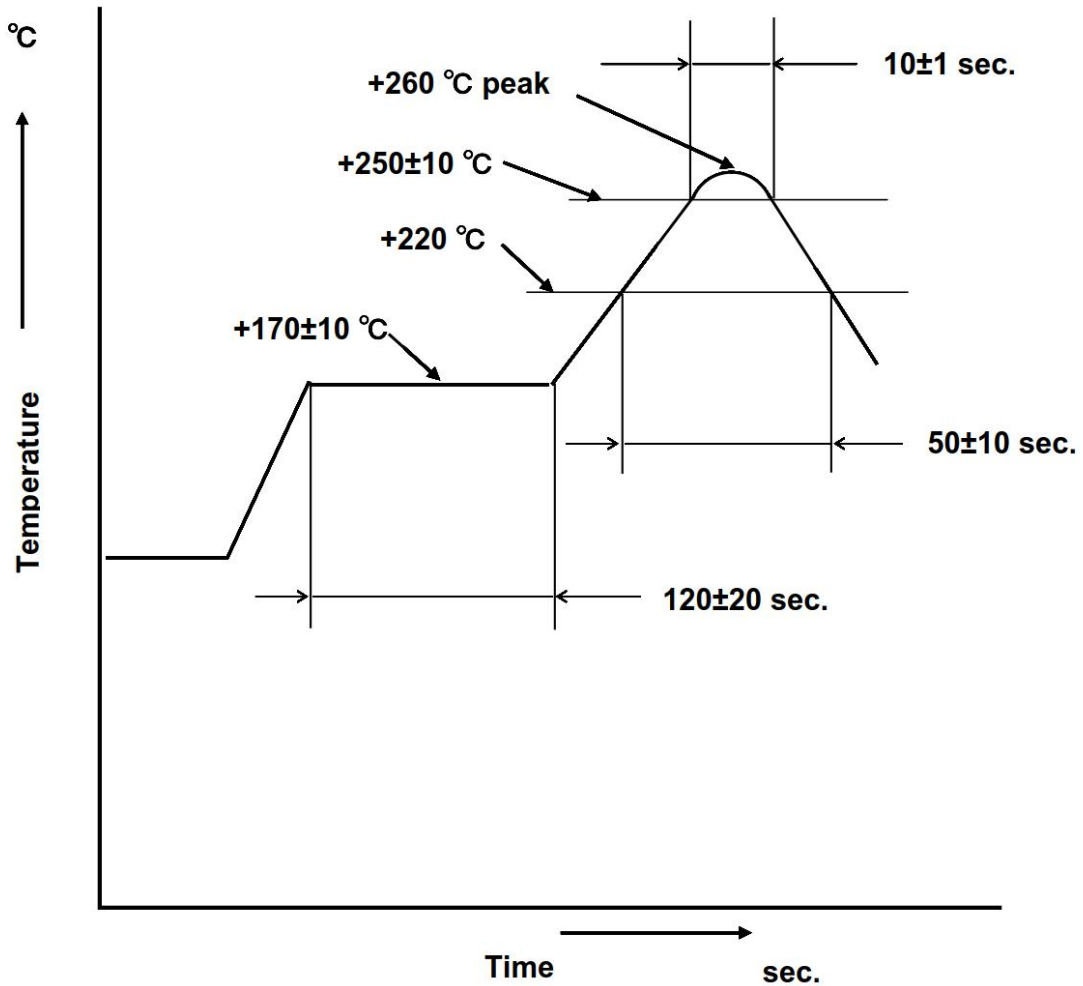
Otherwise unless specified.



Other standards shall be based on JIS C 0806-1990.

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4. Reflow Profile



Note: The temperature used herein means the temperature on the circuit board.

Reflow : 2 times max.

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5. Environment-proof ·Mechanical property

No	Item	Specifications	Conditions	
1	High temperature storage	$\Delta f/f = \pm 10 \times 10^{-6}$	After storage under 85 °C for 500 hrs, measure at room temperature	*1
2	Low temperature storage	$\Delta f/f = \pm 10 \times 10^{-6}$	After storage under -40 °C for 500hrs, measure at room temperature.	*1
3	High temperature and high humidity storage	$\Delta f/f = \pm 10 \times 10^{-6}$	After storage under 60 °C \pm 2 °C, 90 to 95% RH for 500 hrs, measure at room temperature.	*1
4	Thermal shock resistance	$\Delta f/f = \pm 10 \times 10^{-6}$	Measured at room temperature after 20 cycles. -25 °C \leftrightarrow +80 °C for 30 minutes.	*1
5	Mechanical shock resistance	$\Delta f/f = \pm 5 \times 10^{-6}$	Measure after free drop of the RESONATOR three times from the height of 75cm onto a wooden board.	*2
6	Vibration resistance	$\Delta f/f = \pm 5 \times 10^{-6}$	Amplitude 1.5mm and 10 ~ 60Hz with *2 cycle time 2~3 minutes in 3 direction (X,Y,and Z axis)each for 2 hrs.	*1
7	IR Reflow	$\Delta f/f = \pm 10 \times 10^{-6}$	Measure after 1 time reflow under reflow profile specified in page 8	*1

Note:

1. The above tests no. 1 to 7 must be conducted independently (not series tests)
2. *1: Measure after 24 hours soak at room temperature .
3. *2: Measure after 2 hours soak at room temperature .
4. R1 is 85k Ω max. after the each above tests.

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