

SPECIFICATION FOR APPROVAL



CUSTOMER : JWT1155

PRODUCT NAME : SMD CRYSTAL OSCILLATOR

HOLD TYPE : TCXO-2016

NOMINAL FREQ. : 16.369MHz

CUSTOMER P/N : _____

JWT P/N : WN4016M36933T1155011

ISSUE DATE : 2023-12-21

PREPARED	CHECKED	APPROVED
王文蓉	王新鑫	

CUSTOMER APPROVAL:

CHECKED	APPROVED

Please return one copy with approval to JWT



合肥晶威特电子有限责任公司

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1. ELECTRICAL CHARACTERISTICS

1.1. Standard atmospheric conditions

Unless otherwise specified. The standard range of atmospheric conditions for making measurement and tests are as follow:

Ambient temperature : $25 \pm 10^{\circ}\text{C}$
 Relative humidity : 30%~80%

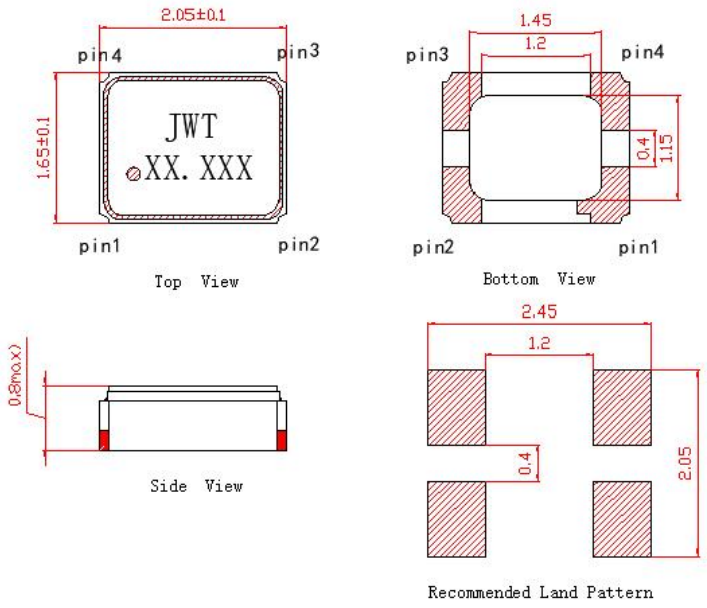
If there is any doubt about the results, measurement shall be made within the following limit:

Ambient temperature : $25 \pm 2^{\circ}\text{C}$
 Relative humidity : 40%~70%

No.	Parameters	Symbol	Specifications				Notes
			Min	Type	Max	Units	
1	Nominal Frequency	F0	16.369			MHz	
2	Frequency Deviation	FT	± 1.0			ppm	After 2 times reflow
3	Frequency Stability Vs. Temperature	FT	± 0.5			ppm	TA = $-30^{\circ}\text{C} \sim 75^{\circ}\text{C}$, VCC=3.3, Ref. to FT@ 25°C
4	Frequency Stability Vs. Load varied	FT	± 0.1			ppm	15pF+/-10%
5	Frequency Stability Vs. Supply Voltage	FT	± 0.1			ppm	3.3V \pm 5%
6	Aging	-	± 1.0			ppm/year	1Year
7	Power Supply Voltage	Vdd	3.0		3.3	V	
8	Power Supply Current	Icc	-	-	2.0	mA	
9	Output Load	-	15 pF			-	$\pm 10\%$
10	Output Waveform	-	CMOS			-	
11	Operating Temperature Range	-	-30	~	+75	$^{\circ}\text{C}$	
12	Start Up Time	Tosc			5	ms	more than 90% of final
13	Storage Temperature Range	-	-55	~	+105	$^{\circ}\text{C}$	
14	ESD	HBM	class2:2000V				
		MM	classB:200V				

2. DIMENSIONS

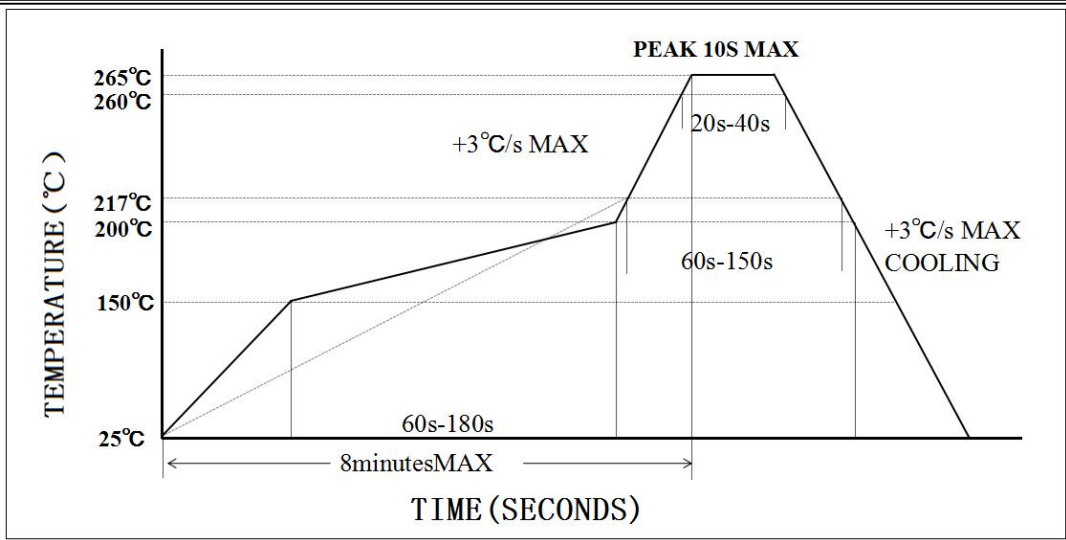
(unit: mm)



Terminal land connections

#1	N/C
#2	GND
#3	OUTPUT
#4	VCC

3. SUGGESTED REFLOW PROFILE

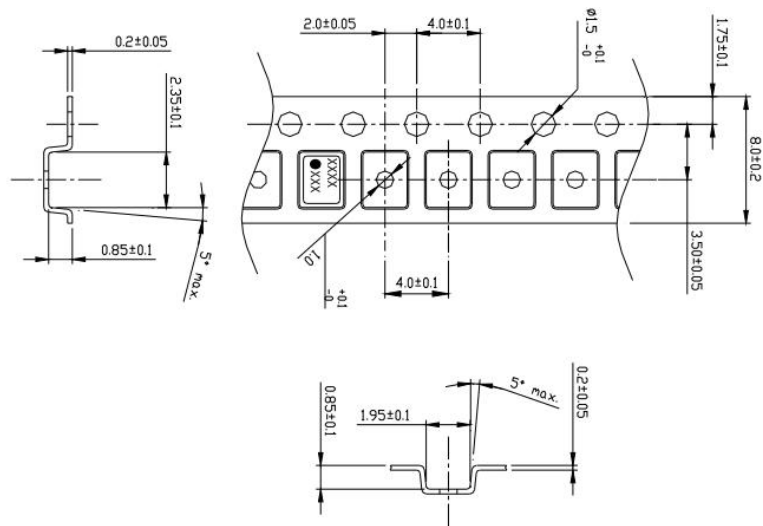


4. EMBOSS CARRIER TAPE & REEL

(unit: mm)

4.1. Dimension of taping and reel

(unit: mm)

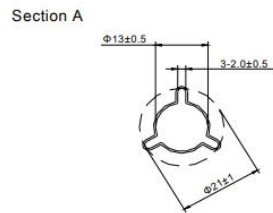
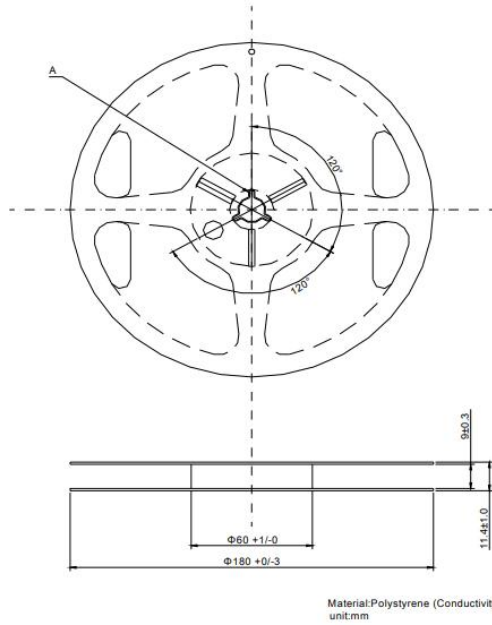


1. Clearance of an embossing tape, and a product unit: mm

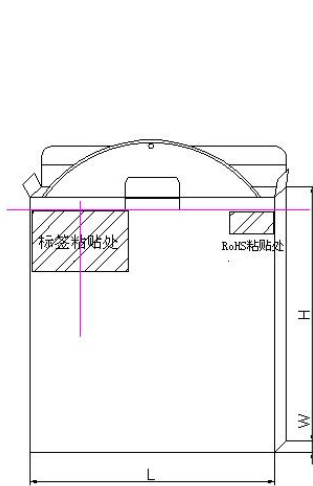
Direction	Pocket size	TCXO size	Clearance
L	2.35±0.10	2.00±0.15	0.35±0.25
W	1.95±0.10	1.60±0.15	0.35±0.25
H	0.85±0.05	0.70±0.10	0.15±0.15

2. Quality : Polystyrene (Conductivity)

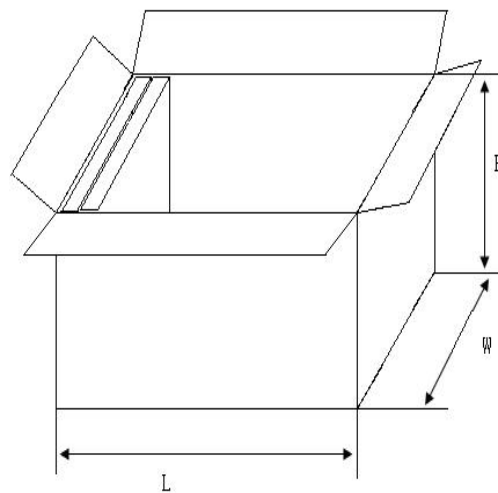
3. Tensile strength of an embossing tape : more than 14N



4.2. Packing



1 Reel/Inner Box



10 In-Boxer/Catton(Standard)

Package & Quantity

Type	Size (L*W*H)	Quantity
Inner Box	180*20*180	1000pcs
Catton	240*200*200	10000pcs

Standard Reel Quantity is 1000pcs per reel.

4.3. Contents of Packaging Labels

* CUSTOMER No.

* NOMINAL FREQUENCY

* LOAD CAPA.

* HOLDER TYPE

* FREQ. TOLERANCE

* ESR

* QUANTITY

* DATE

* LOT.

* MARKING

* P/N

★ Remark

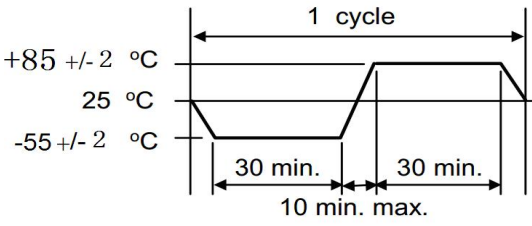
Customer specified requirements for marking , Labels, packaging, please provide the operation procedure.

5. RELIABILITY SPECIFICATIONS

5.1. MECHANICAL ENDURANCE

No.	Test Item	Experimental standard	Test Methods	Test Criteria
1	Drop Test	GB/T2423.8	Electrical characteristics shall be satisfied after dropping three times from the height of 150cm onto the board of the 3cm thickness.	A、 C
2	Mechanical Shock	GB/T2423.5	Device are shocked to half sine wave (1000 G), duration time :0.5ms, and three mutually perpendicular axes each 3 times	A、 C
3	Vibration	GB/T2423.10	Frequency range 20 ~ 2000Hz PSD 0.053g ² /Hz Sweep Time 20 min Direction x,y,z Test time 15min/Each Direction	A、 C
4	Solder ability	IEC60068-2-58	Temperature 245°C ± 5°C Immersing depth 0.5 mm minimum Immersion time 3 ± 0.5 seconds Flux Rosin resin methyl alcohol solvent (1 : 4)	E

5.2. ENVIRONMENTAL ENDURANCE

No.	Test Item	Experimental standard	Test Methods	Test Criteria
5	Resistance To Soldering Heat	IEC60068-2-58	Pre-heat temperature 180 °C Pre-heat time 60 ~ 120 sec. Test temperature 260 ± 5 °C Test time 10 ± 1 sec.	A、 C、 D
6	HighTemp. Storage	GB/T2423.2	+125 °C ± 2 °C for 240 hours	A、 C、 D
7	LowTemp. Storage	GB/T2423.1	-55 °C ± 2 °C for 240 hours	A、 C、 D
8	Thermal Shock	GB/T2423.22	Total 10 cycles of the following temperature cycle 	A、 C、 D
9	High Temp & Humidity	GB/T2423.3	85 °C ± 3 °C, RH 85%, 500Hrs	A、 C、 D

5.3. RELIABILITY SPECIFICATIONS

Specifications	
A	Frequency change: Within ±5ppm or in customer's specification.
B	Frequency change: Within ±10ppm or in customer's specification.
C	Effective resistance (RR) change: Within ±20% or 5Ω (larger value).
D	After conditioning, quartz crystal units shall be subjected to standard atmospheric conduction for 2 hour, and measured.
E	Minimum 95% of immersed terminal shall be covered with new uniform solder.

★Note:

1. The above reliability items are routine test items of our company. If the customer needs the product to drop, impact, collision and other processes, please feedback your requirements to our company, and our company will update the reliability items of the product.

2. The product meets the requirements of environmental protection standards, please

contact us when you need test report.