SPEC NO.: 181119

Specification

TO:STE
Model Name: Ceramic Resonator
PART NO:ZTACS8.00MT
CUSTOMER PART NO.:

Approval sheet:

Approved	Yes No.

Customer's comments are welcomed here.

Please return this copy as a certificate of your approval by Email.

Approved By Date: _____

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History Record

Date	Part No.	SPEC No.	Description.	Remarks.
RoHS Compliant Lead free Lead-free soldering	conflict mineral free REACH compliant			
ISO9001:2000	ISO14001:2004	**Approved by**	**Check by**	**Design by**
		Nov-17-2017	**NOV-17-2017**	**NOV-17-2017**
Reversions	**Total Page**	*Xu gang dong*	*Liu jun*	*Wang hon*

1 SCOPE

This specification shall cover the characteristics of the ceramic resonator with the type ZTACS8.00MT.

2 PART NO.

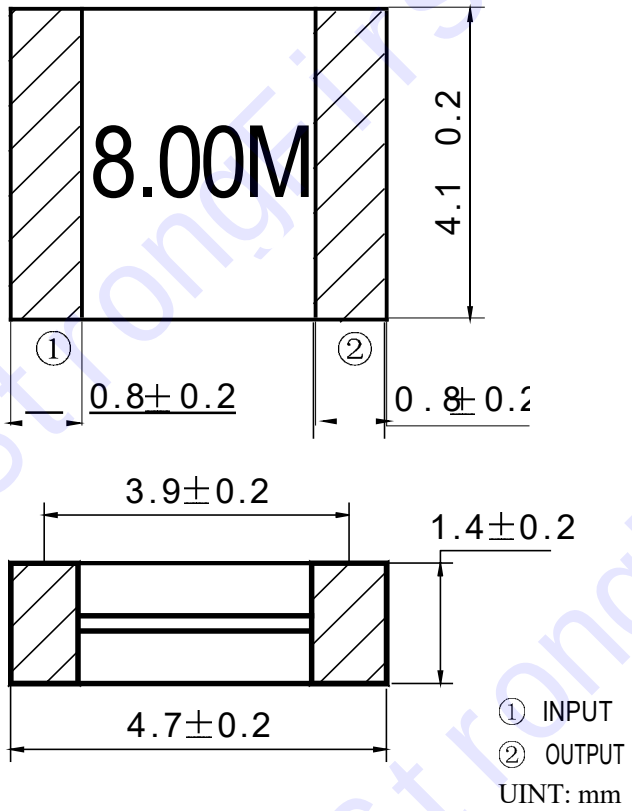
PART NUMBER	SPECIFICATION NO
ZTACS8.00MT	

3 OUTLINE DRAWING AND DIMENSIONS

3.1 Appearance: No visible damage and dirt.

3.2 Except the chip(ceramic element, ceramic base, capacitance slice), the materials don't contain lead.

3.3 Dimensions



4 RATING AND ELECTRICAL SPECIFICATIONS

4.1 RATING

Items	Content
Withstanding Voltage (V)	50 (DC，1min)
Insulation Resistance *Ri,*（MΩ） min.	100 （100V，1min）
Operating Temperature Range (℃)	-40～+85
Storage Temperature Range (℃)	-55 ～+105

4.2 ELECTRICAL SPECIFICATIONS

Oscillation Frequency Fosc（MHz）	8.000
Frequency Accuracy （%）	±0.5
Resonant Impedance Ro（Ω） max.	30
Temperature Coefficient of Oscillation Frequency （%） max.	±0.3 （Oscillation Frequency drift，-40℃～+85℃）
Rating Voltage U_R（V） max.	6V DC
	15V p-p
Aging Rate （%） max.	±0.3 （For Ten Years）

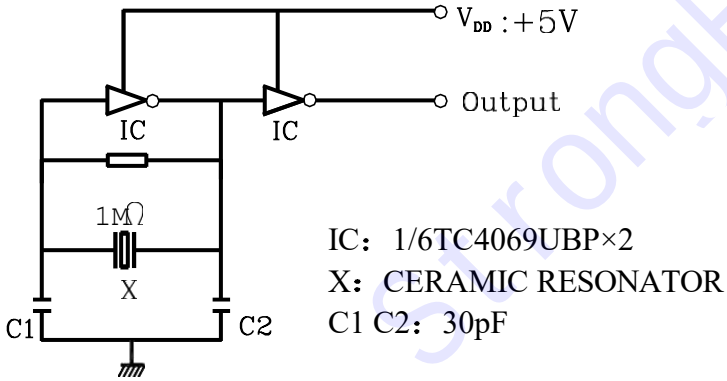
5 MEASUREMENT

5.1 Measurement Conditions

Parts shall be measured under a condition (Temp. 20±15 ℃ ,Humidity 65%±20%

R.H.) unless the standard condition(Temp. 25 ±3℃, Humidity 65%±5% R.H.) is regulated to measure.

5.2 Test Circuit



IC：1/6TC4069UBP×2
X：CERAMIC RESONATOR
C1 C2：30pF

6 PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

No.	Item	Condition of Test		Performance Requirements
6.1	Humidity	Keep the resonator at 40±2℃ 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.
6.2	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.
6.3	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.
6.4	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.
		Temperature at the surface of the Substrate	Time	
		Preheat 150 ±5℃	60s±10s	
		Peak 260 ±5℃	10s±3s	
6.5	Solder Ability	Dipped in 245±5℃ solder bath for 3s±0.5s with rosin flux (25wt% ethanol solution.)		The terminals shall be at least 95% covered by solder.
6.6	High Temperature Exposure	Subject the resonator to 80±5 ℃ for 96h, then release the resonator into the room conditions for 1h prior to the measurement.		It shall fulfill the specifications in Table 1.
6.7	Low Temperature Exposure	Subject the resonator to -40±5 ℃ for 96h, then release the resonator into the room conditions for 1h prior to the measurement.		It shall fulfill the specifications in Table 1.

6.8	Temperature Cycling	Subject the resonator to -40 ℃ for 30 min. followed by a high temperature of 85 ℃ 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.

(To be continued)

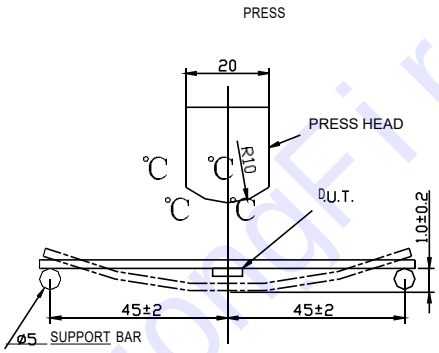
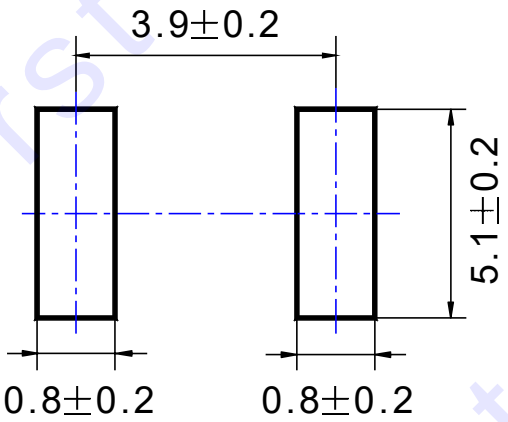
6.9	Board Bending	Mount a glass-epoxy board(Width=40mm, thickness= 1.6mm), then bend it to 1mm displacement and keep it for 5 s. (See the following figure) 	Mechanical damage such as breaks shall not occur.

TABLE 1

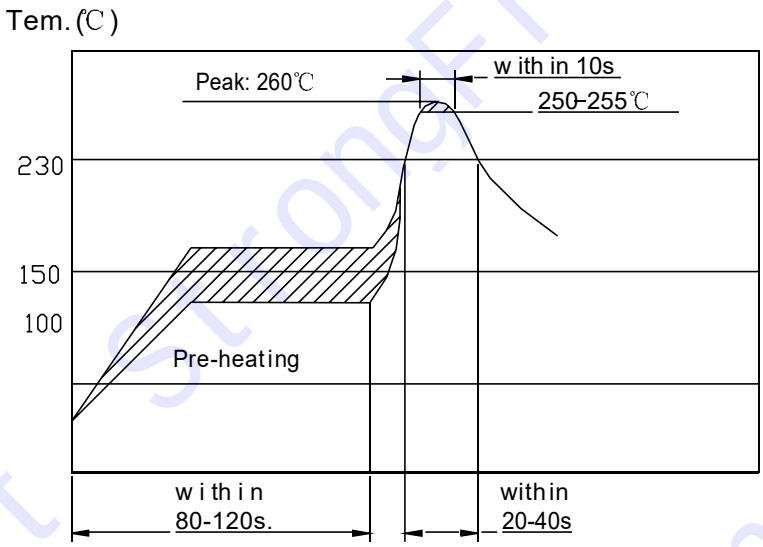
Item	Specification
Oscillation Frequency Change △Fosc/Fosc (%) max	0.3
Resonant Impedance (Ω) max	30
Note: The limits in the above table are referenced to the initial measurements.	

7 RECOMMENDED LAND PATTERN AND REFLOW SOLDERING STANDARD CONDITIONS

7.1 Recommended land pattern



7.2 Recommended reflow soldering standard conditions



8 PACKAGE

To protect the products in storage and transportation，it is necessary to pack them （outer and inner package）

8.1 Section of package

Package is made of corrugated paper with thickness of 0.8cm.Package has 10 inner boxes.

8.2 Quantity of package

Per reel 1000 pieces

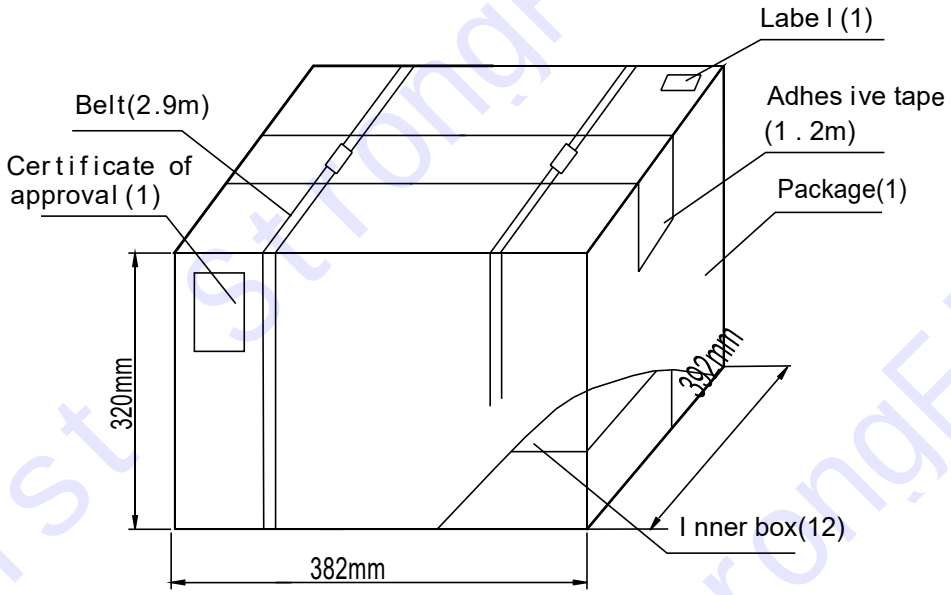
Per inner box 5 reels

Per package 12 inner boxes

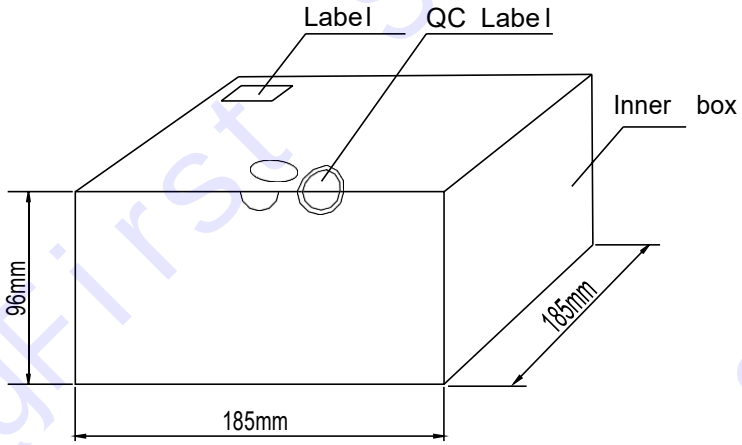
（60000 pieces part）

8.3 Dimensions and mark of package

At the end of package, the warning (moisture proof, upward put) should be stick to it（see below）.

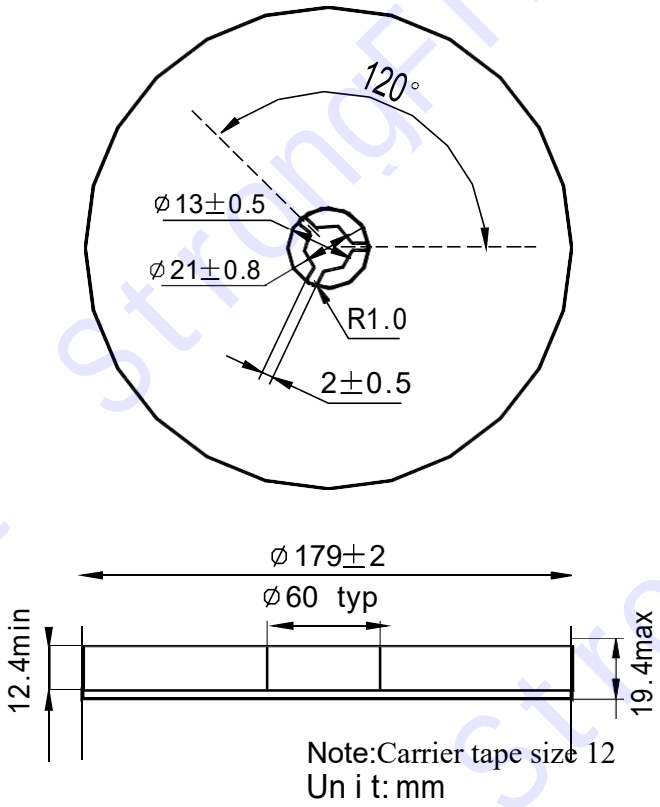


7.4 Dimensions and mark of inner box

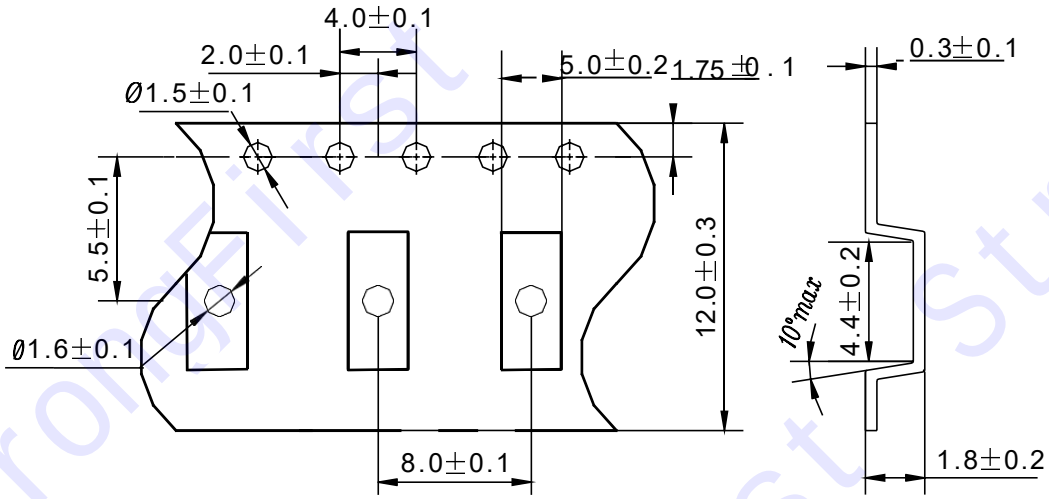


Pars shall be packaged in box with hold down tape upside. Part No., quantity and lot No.

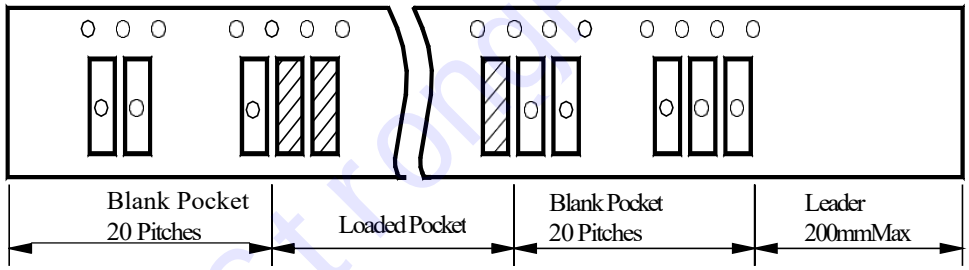
7.5 Reel



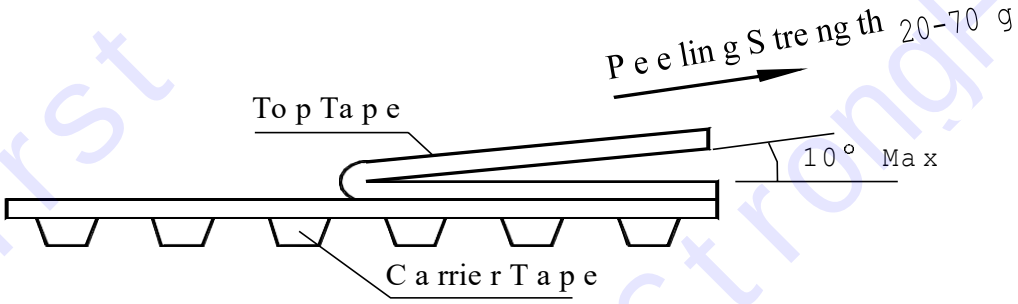
7.6 Taping Dimensions



7.7 Packing Method Sketch Map



7.8 Test Condition Of Peeling Strength



9 OTHER

9.1 Caution of use

9.1.1 Do not use this product with bend. Please don’t apply excess mechanical stress to thecomponent and terminals at soldering.

9.1.2 The component may be damaged when an excess stress will be applied.

9.1.3 This specification mentions the quality of the component as a single unit. Please insure the component is thoroughly evaluated in your application circuit.

9.2 Notice

9.2.1 Please return one of this specification after your signature of acceptance.

9.2.2 When something gets doubtful with this specification, we shall jointly work to get an agreement.