

# 樣品承認書 SAMPLE APPROVAL SHEET

CUSTOMER:
SIZE UP:
PART NO:ZTT
NUMBER:
DATE:

承認後請寄回一份

## PLS SEND BACK ONE COPY TO US AFTER YOUR APPROVAL

承認結	<b>声果</b>	客戶簽名	客戶承認章	日期	備注
CONCLU	ISION	<b>SIGNATURE</b>	STAMP	DATE	REMARK
合格	, T				
ACCE	PT				
不合	格				
REJE	CT				

深圳市帝国<mark>科技有限公司 电话 0755-2788111</mark>9

E-mail:dgkjlky.com 网址: http://www.dgkjly.com

# SPECIFICATION OF CERAMIC RESONATOR

## 1.790~60.000 MHZ

1. PART NO. : MT

SPECIFICATION No.: QJ/A72•16•9801

2. ABSOLUTE MAXIMUM RATINGS

OSCILLATING FREQUENCY : 1.790~60.000MHz±0.3%

MAXIMUM APPLIED DC VOLTAGE : 5 0 V LOWER MOST WORKING VOLTAGE : < 3V

MAXIMUM LOAD VOLTAGE : 20 V p-p

OPERATING TEMPERATURE RANGE : -20℃TO +85℃

FREQUENCY DRI FT VERSUS TEMPERATURE : LESS T HAN ±0.3%

STORAGE TEMPERATURE RANGE :  $25 \pm 5^{\circ}$ C

FREQUENCY AGING (FOR 10 YEARS) : LESS T HAN  $\pm 0.3\%$ 

**RES**ONANT IMPEDANCE ( $\Omega$ ) : 30  $\Omega$  MAX.

CAPACITANCE (C) :  $3 \text{ O PF } \pm 20\%$ 

3. ENVIRONMENTAL SPECIFICATIONS

ELECTRICAL CHARACTERISTICS CHANGE OF THE RESONATOR SUPPLIED TO THE FOLLOWING TESTS MUST BE LESS THAN VALUES SHOWN IN TABLE.1 WITH THE EXCEPTION OF I TEM 3-7.

## TABLE.1

<u>CHARACTERISTICS</u>	MAXIM <mark>UM CHANGE</mark>
OSCILLATING FREQUENCY F OSC.	±0.25% MAX.
RESONANT IMPEDANCE Ro .	$\pm 10\Omega$ MAX.
CAPACITANCE Cd .	±10% MAX.

- 3-1 LOW TEMPERATURE STORAGE: STORED IN -20°C FOR 100 HOURS, AND TAKEN OUT TEMPERATURE FOR 2 HOUR BEFORE MEASUREMENT.
- 3-2 HIGH TEMPERATURE STORAGE: STORED IN +85°C FOR 100 HOURS, AND THEN TAKEN OUT TO ROOM TEMPERATURE FOR 2 HOUR BEFORE MEASUREMENT.
- 3-3 THERMAL SHOCK TEST: SUBMIT THE RESONATOR TO 10 CYCLES OF THE FOLLOWING SEQUENCE OF CONDITIONS IN AIR;

-20°C FOR 30 MINUTES +85°C FOR 30 MINUTES AND THEN TAKE OUT TO ROOM TEMPERATURE FOR 2 HOUR BEFORE MEASURMEN

3-4 VIBRATION TEST: MOUNT FIXTURE TO A VIBRATION TABLE AND SUBJECT IT TO THE FOLLOWING CONDITIONS IN EACH OF 3 MUTUALLY PERPENDICULAR PLANES.

AMPLITUDE: 1 .52 mm DISPLACEMENT

FREQUENCY: 10 TO 55 Hz, RATE OF CHANGE 1.5 Hz/S

DURATION: 1 HOUR IN EACH PLANE

- 3-5 SHOCK TEST: MOUNT THE RESONATOR BODY ON THE SHOCK
  PLATFORM AND SUBJECT IT TO THE FOLLOWING 3 SHOCK PULSES IN EACH
  DIRECTION OF 3 MUTUALLY PERPENDICULAR PLANES. (18 SHOCK PULSES)
- 3-6 HUMIDITY TEST: STORED IN 95% AT 40 °C ±2°C FOR 100 HOURS, AND THEN TAKEN OUT TO ROOM TEMPERATURE FOR 2 HOUR BEFORE MEASUREMENT.
- 3-7 SOLDERABILITY:DIPPED IN 230°C MELTED SOLDER BATH TO A POINT 1.5mm FROM RESONATOR BODY FOR 3 SECONDS.

  SPECIFICATION

THE TERMINALS SHALL BE AT LEAST 95% COVERED BY SOLDER COATING.

3-8 SOLDERING TEST: DIPPED IN 240°C ±5°C MELTED SOLDER TO A POINT 2.0/0.5mm FROM RESONATOR BODY FOR 10 ±1 SECONDS (OR 300°C ± 10°C MELTED SOLDER TO A POINT 2.0 / 1.5 mm FROM RESONATOR BODY FOR 3±1 SECONDS),AND THEN TAKEN OUT TO ROOM TEMPERATURE FOR 2 HOUR BEFORE MEASUREMENT.

### 3-9 LEAD RESTRAINT:

- 3-9-1 TERMINAL TENSILE STRENGTH: SPECIFIED FORCE OF 4.9N APPLIED TO THE TERMINAL IN THE DIRECTION OF AXIS OF TERMINATION.
- 3-9-2 TERMINAL BENDING STRENGTH: A SPECIFIED LOAD OF 2.45N SUSPENDED FROM.

THE TERMINAL ,THEN SLOWLY INCLINED THE RESONATOR BODY SO AS TO BEND.

THE TERMINAL THROUGH 90°, AND THEN RETURN TO NORMAL POSITION.
THE CONSECUTIVE BE DONE IN THE OPPOSITE DIRECTION.

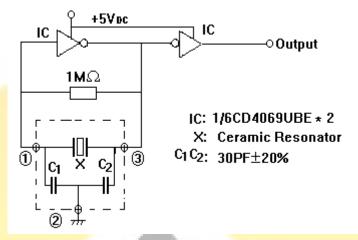
### 4. PACKAGE FORM

MIMIMUM PACKAGING UNIT: 500PCS. (A VINYL BAG)

SHIPPING CARTON (SMALL): 500 \* 4 = 2,000PCS

SHIPPING CARTON (LARGE): 2000 \* 20 = 40,000PCS (27cm\*27cm \*22.5cm)

#### 5. MEASUREMENT CIRCUIT



- 6. SUGGESTIONS HOW TO USE CERAMIC RESONATORS
- 6-1 TERMINAL BENDING LIMIT

TERMINAL BENDING FOR THIS PRODUCT SHOULD BE WITHIN ENVIRONMENTAL

SPECIFICATIONS (BENDING TIMES AND BENDING LOAD)

6-2 HOW TO WASH

THIS PRODUCT IS NOT HERMETIC CONSTITUTED, CANNOT BE WASHED BY ACIDIC OR ALKALINE IONIC SOLUTION.

**6-3 TREATMENT OF FALLING PARTS** 

IN CASE OF FALLING TO THE FLOOR FROM WORKING TABLE,PLEASE REFRAIN FROM USING IT, AS THE POSSIBILITY OF LEAD BENDING OF UNEXPECTED SHOCK.

- 6-4 REQUIREMENT AND REPLACEMENT BY SOLDERING
  - 6-4-1 SOLDERING IRON TEMPERATURE: LOWER THAN 300°C
  - 6-4-2 HEATING TIME : TOTAL ACCUMULATION OF HEATING TIME SHOULD BE LESS THAN 10 SECONDS
- 7. DIMENSIONS(mm)

