SPECIFICATION

CUSTOMER ： _____

PRODUCT NAME： CERAMIC RESONATOR

PART NUMBER ： Z3.58M

1. PART NO. : Z3.58M

SPECIFICATION No.: QJ/A71•04•0403

2. ABSOLUTE MAXIMUM RATINGS

OSCILLATING FREQUENCY : 3.58Mhz±0.5%

MAXIMUM APPLIED DC VOLTAGE : 50 V

LOWER MOST WORKING VOLTAGE : 3.3V

MAXIMUM LOAD VOLTAGE : 20 Vp-p

OPERATING TEMPERATURE RANGE : -20℃TO +85℃

FREQUENCY DRIFT VERSUS TEMPERATURE : LESS THAN ±0.3%

STORAGE TEMPERATURE RANGE : 25±5℃

FREQUENCY AGING (FOR 10 YEARS) : LESS THAN ±0.3%

RESONANT IMPEDANCE (Ω) : 30Ω MAX.

CAPACITANCE (C) : 22PF ± 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 ITEM 3-7.

T A B L E . 1

CHARACTERISTICS		MAXIMUM CHANGE
OSCILLATING FREQUENCY	FOSC.	±0.25% MAX.
RESONANT IMPEDANCE	Ro.	±10Ω MAX.
CAPACITANCE	Cd.	±10% MAX.

3-1 LOW TEMPERATURE STORAGE: STORED IN -20℃ FOR 100 HOURS, AND TAKEN OUT TEMPERATURE FOR 2 HOUR BEFORE MEASUREMENT.

3-2 HIGH TEMPERATURE STORAGE: STORED IN +85℃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℃ FOR 30 MINUTES

+85℃ 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 ℃±2℃FOR 100 HOURS, AND THEN TAKEN OUT TO ROOM TEMPERATURE FOR 2 HOUR BEFORE MEASUREMENT.

3-7 SOLDERABILITY:DIPPED IN 250℃ 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 260℃±5℃ MELTED SOLDER TO A POINT 2.0/0.5mm FROM RESONATOR BODY FOR 10 ±1 SECONDS (OR 360℃ ± 10℃ 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^{o} , AND THEN RETURN TO NORMAL POSITION.

THE CONSECUTIVE BE DONE IN THE OPPOSITE DIRECTION.

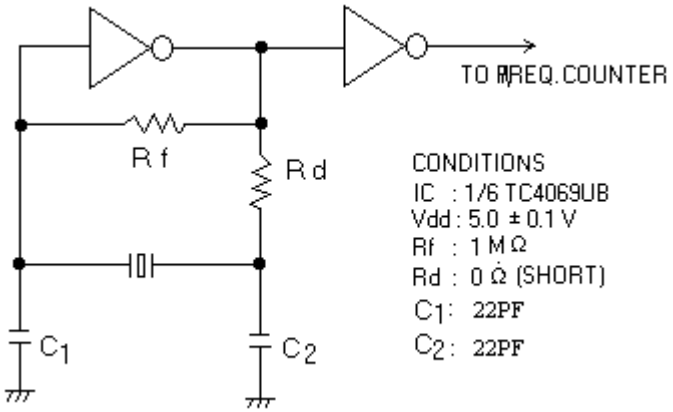
4. PACKAGE FORM

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 360℃

6-4-2 HEATING TIME : TOTAL ACCUMULATION OF HEATING TIME SHOULD BE LESS THAN 10 SECONDS

7. DIMENSIONS(mm)