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Jameco Part Number 325139

文件编号：

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SPECIFICATIONS FOR APPROVAL

Customer JAMECO

Part No: TKD-QR-16MHZ000-20P-W-US Freq 16.000MHz

JAMECO NO. : 325139 Products: HC-49S

Accepted Model: _____ Spec.No: Quartz Crystal

Sample Order: _____ Date: 2005-7-12

Approved By:

菁 盛 企 業 有 限 公 司
GOLDSUN ELECTRONICS Co., Ltd

公司地址：台北縣中和市中正路 716 號 10F (遠東世紀廣場 L 棟)

10F, NO.716 CHUNG CHENG ROAD., CHUNGHO CITY, TAIPEI HSIEN, TAIWAN,

R.O.C.

TEL : 006 2 02272020 02280716 FAX: 006 2 0220 0777

Features

1. Cost effective with excellent reliability
2. Excellent aging
3. Low profile

Partner Number

TKD-QR-16MHZ000-20P-W-US

JAMECO NO. 325139

Electrical Characteristics

Frequency Range	16.000MHz
Calibration Tolerance	+/-30ppm
Temperature Stability	+/-50ppm
Load Capacitance	20pF
Series Resistance	40 Ohm
Operating Temperature Range	-40°C to +85°C
Storage Temperature Range	-40°C to +85°C
Operating Mode	Fundamental
Drive Level	0.5Mw
Insulation Resistance	500MOhm Min at 100V
Shunt Capacitance	7 pF, Max
Aging	<10 ppm/Yr
Type	HC49US

Reliability Test

Mechanical Performance Tests

1. Shock: The crystal unit is dropped from the height of 50 cm in free fall condition a 30 mm thick hardwood board for three times. (Spec.No.A)
2. Vibration: Subject the sample to 1.5-minute cycles of frequencies of 10 to 55 Hz and amplitudes of 1.5 mm for two hours in each of the X,Y and Z directions, for 6 hours in total. (Spec.No.A)
3. Tensile Strength : Apply a 1.5 kg tensile load to each terminal and sustain it for 30±5 seconds. (Spec.No.A.C.)
4. Bending Strength of Terminal: Apply a 0.5kg load to one of the terminals, and after tilting the main unit for 90°, restore to its original attitude. Then , tilt it in an opposite direction for 90° and restore to its original attitude .(Spec. NO.A.C)

5. Solderability: Dip terminals in RMA flux for 5 ± 0.5 sec .under room temperature. Dip terminals in a $230\pm 5^{\circ}\text{C}$ solder bath for 5 ± 0.5 seconds. The solder shall leave an undipped terminal length of 2 mm at their base . (Spec.No.D)
6. Resistance to Soldering Heat:: Dip terminals in a $260\pm 5^{\circ}\text{C}$ solder bath for 10 ± 0.5 seconds. The solder shall leave an undipped terminal length of 2mm at their base. (Spec.No.A)
7. Leakage Test: Take measurements with a helium leak age detector. (Spec.No.E.)

Environmental Tests:

1. Cold:Expose the sample in an inoperative mode to 500 hours in a -40°C .(Spec.No.A)
2. Dry Heat: Expose the sample in an inoperative mode to 500 hours in a $+85^{\circ}\text{C}$.(Spec.No.B)
3. Damp Heat :Expose the sample in an inoperative mode to 500 hours in a $+65^{\circ}\text{C}$,and 95%RH. (Spec.No.B)
4. Thermal Shock: Subject the sample to 5 temperature variation cycles at -40°C for 30 minutes and $+100^{\circ}\text{C}$ for the next 30 minutes in each cycle . (Spec.No.A)

Spec. NO	Specification
A	Any variation between the pre-and post-test frequencies shall remain within $\pm 5\text{PPM}$.The post-test equivalent series resistance shall remain within its specified tolerance range.
B	Any variation between the pre-and post-test frequencies shall remain within $\pm 10\text{PPM}$.The post-test equivalent series resistance shall remain within its specified tolerance range.
C	After each test, no visible damage shall be manifested, nor shall the hermetic

	seal break down..
D	At least 90% of each dipped area shall be covered by fresh solder.
E	$1 \times 10^2 \mu\text{Pa} \cdot \text{m}^3/\text{s}$ Max.

✦ Measurements shall be taken at $25\pm 2^{\circ}\text{C}$, and after each test, the sample be exposed to one to two hours at $25\pm 2^{\circ}\text{C}$.

Package Dimension (Unit: mm)
Example



