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APPROVAL SHEET

CUSTOMER'S NAME : _____

MODEL NUMBER : SPK - 16M - 5032

16M 18PF 20PPM 5*3.2

SPEC RECORD NUMBER : SPK - 980114 - 001

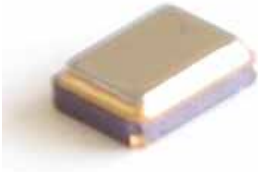
APPROVAL DATE : 2010 - 01 - 14

Confirmed Signature:

Authorized Signature:

SPK-5032

GENERAL SPECIFICATIONS
Environmental Specification:
Surface mount crystal



1. GENERAL SPECIFICATIONS

- 1.1 Holder Style : SPK-5032
- 1.2 Frequency : 16.000MHz
- 1.3 Mode Of Oscillation : Fundamental
- 1.4 Frequency tolerance at 25°C : +/- 20 PPM
- 1.5 Frequency Stability at (-20°C ~ +70°C) : +/- 20 PPM
- 1.6 Load Capacitance (CL) : 18pf
- 1.7 Static capacitance (CO) : 6PF max
- 1.8 Ts :
- 1.9 Resonance Resistance (RR) : 40 Ω
- 1.10 Drive Level : 10 uW max
- 1.11 Insulation Resistance : 10M ohm MIN
- 1.12 Aging : +/- 3ppm/year
- 1.13 Operating temperature : -20 °C ~ +70 °C
- 1.14 Measurement Condition : the reference temperature shall be at 25°C ± 2°C

2. ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

The crystal shall meet electrical characteristics and suffer no physical damage after being subject to the following conditions.

2.1 Storage Temperature $:-40^{\circ}\text{C} - 85^{\circ}\text{C}$

2.2 Shock: drop freely from 75cm height 3 times on 30mm thick hard wooden board.

2.3 Vibration: frequency 10—55Hz

Amplitude 1.5mm

2 hours in each of 3 mutually perpendicular direction.

2.4 Solderability: temperature $235^{\circ}\text{C} \pm 5^{\circ}\text{C}$

Immersion duration: 2 ± 0.5 seconds

2.5 Resistance to soldering heat: temperature $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$

Immersion duration: 10 ± 1 seconds.

2.6 Humidity: humidity $95\% \pm 3$, temperature 40°C , 96 hours.

2.7 Seal: pressure :400Kpa, immersion duration : 30 minutes,

Leakage rate $< 5 \times 10^{-9} \text{ Pa m}^3/\text{s}$

2.8 Terminal strength: pull:1.5kg,30 seconds

Bend:0.75kg, 90°C , 2 times.

2.9 Temperature cycle: lowest temperature -40°C ,30minutes/cycle

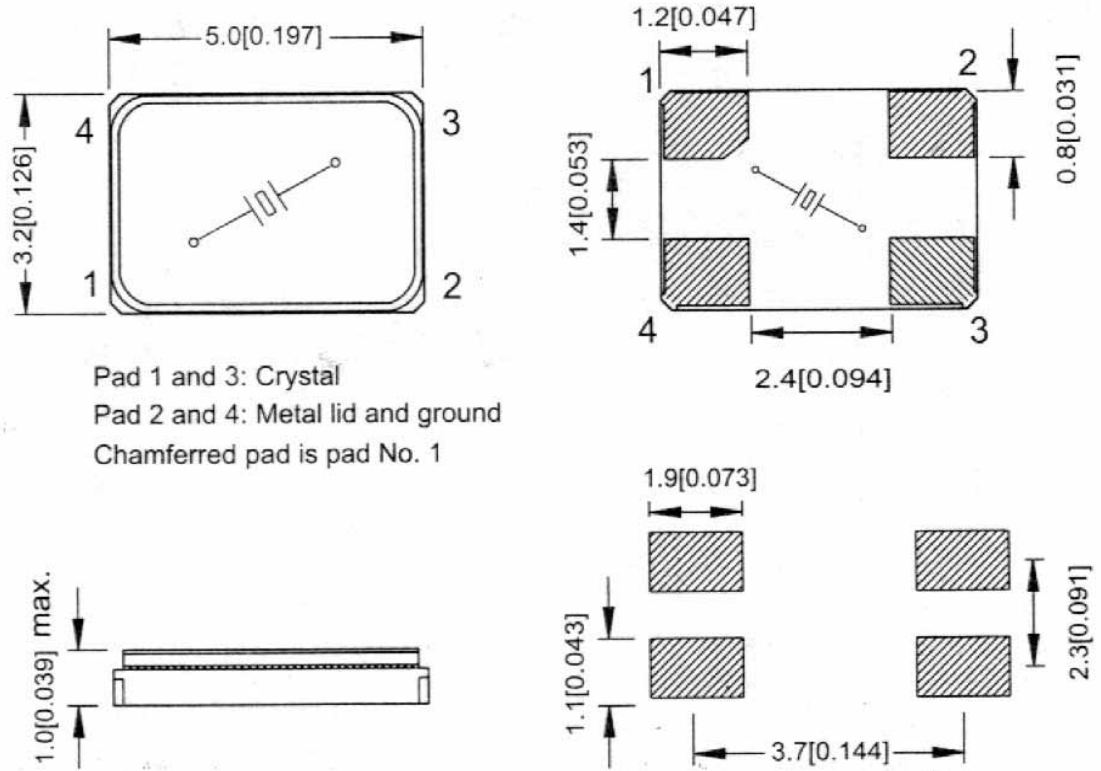
Highest temperature $+85^{\circ}\text{C}$,30 minutes/cycle

10 cycles

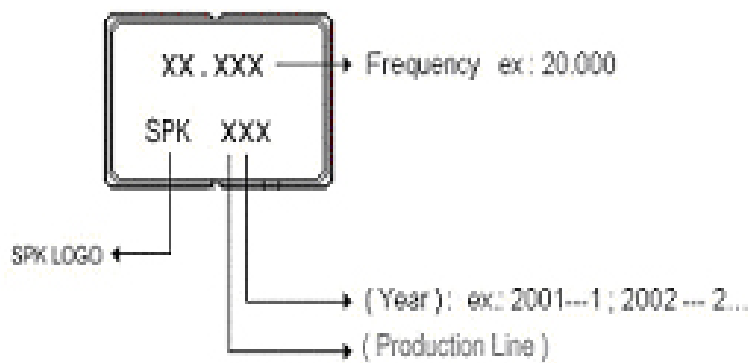
2.10 Aging: temperature $+85^{\circ}\text{C}$

Duration 30 days.

3.Dimension

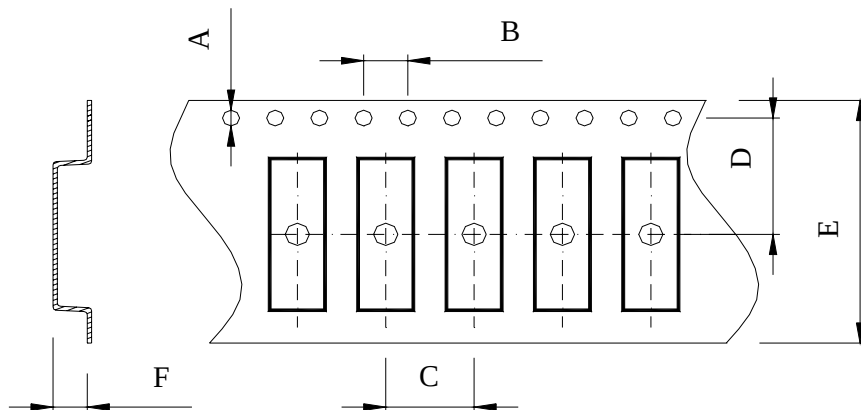


4. Marking: laser marking

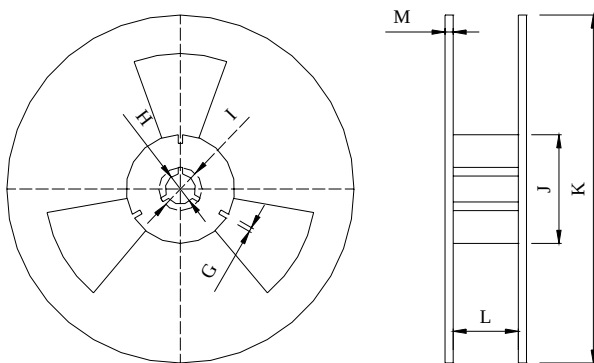


5. Package and Label

5.1 Package dimension: 1 REEL : 1000 PCS

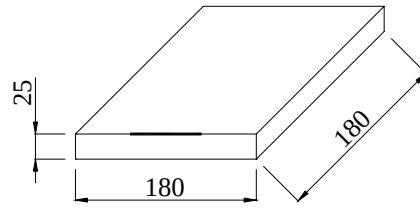
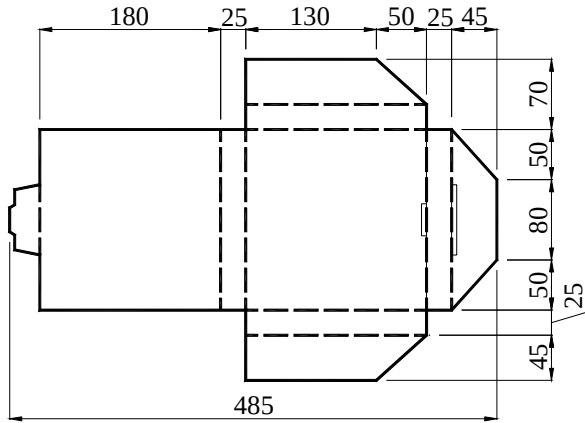


A	B	C	D	E	F
1.50	4.0	8.0	5.5	12.0	1.1

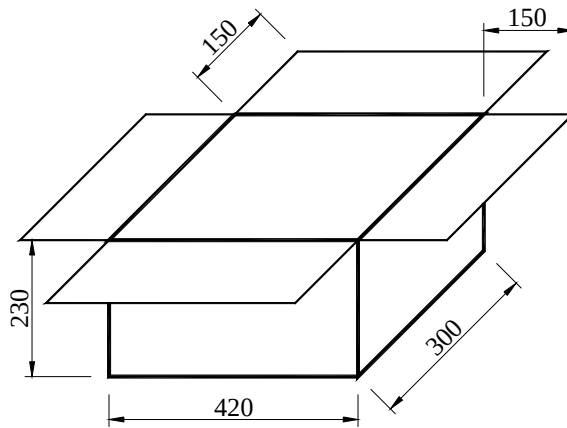
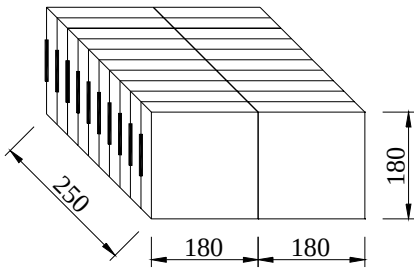


G	H	I	J	K	L	M
2.5	13.0+/-0.2	21.0+/-1	60	180	17.65	1.4

.Carton Dimension (unit : mm)



1 reel = 1 Inner box



20 Inner boxes = 1 Carton

20kpcs = 1 Carton

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