

## Quartz Crystal Unit

## 2K Series

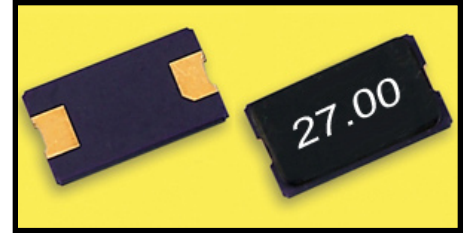
Glass Sealed Ceramic SMD Package (8 x 4.5 x 1.5mm)

(2 Pad)

# MEC Crystals

### Features:

- Ultra small SMD type crystal units
- High reliable environmental performance (ceramic package, glass sealed)
- Reasonable cost
- Good delivery performance
- **RoHs Compliant (Pb Free)**



### Electrical Specifications:

Frequency Range	8.000MHz ~ 80.000MHz
Frequency Tolerance	±10ppm ~ ±50ppm or specify
Frequency Stability over Operating Temperature	-10°C ~ +60°C ±30ppm, -20°C ~ +70°C ±50ppm or specify
Operating Temperature Range	-40°C to +85°C
Storage Temperature Range	-55°C to +125°C
Shunt Capacitance (C <sub>0</sub> )	5.0pF max
Drive Level (Typical)	10µW
Load Capacitance (C <sub>L</sub> )	Series, 16pF, 20pF, 30pF, 32pF or specify
Equivalent Series Resistance	see chart
Aging @25°C 1st year (max)	±3 ppm, ±5 ppm / year
Shock Resistance	Drop test of 3 times on 2mm stainless plate from 75 cm height

### Equivalent Series Resistance (ESR) and Mode of Operation (Mode):

Frequency Range	E.S.R. (ohm)	Mode
8.000MHz ~ 10.000MHz	70 max	Fundamental / AT
10.000MHz ~ 40.000MHz	40 max	Fundamental / AT
30.000MHz ~ 45.000MHz	60 max	3rd Overtone / AT
45.000MHz ~ 80.000MHz	50 max	3rd Overtone / AT

### Part Numbering System:

**2K** **16.000** **F** **16** **X** **10** **30**  
① ② ③ ④ ⑤ ⑥ ⑦

① Series

2K
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② Frequency

Frequency
ex. 16.000

③ Mode of Vibration

Code	Cut-Mode
F	AT Fund
3	AT 3rd OT

④ Load Capacitance CL

Code	Load Capacitance
S	Series
16	16pF
20	20pF
30	30pF
32	32pF

⑤ Operating Temperature

Code	Ranges
A	-10°C ~ +60°C
B	-20°C ~ +70°C
X	-40°C ~ +85°C

⑥ Frequency Tolerance

Code	Tolerance
10	± 10 ppm
15	± 15 ppm
20	± 20 ppm
25	± 25 ppm
30	± 30 ppm
50	± 50 ppm
or specify	

⑦ Frequency Stability

Code	Stability
10	± 10 ppm
15	± 15 ppm
20	± 20 ppm
25	± 25 ppm
30	± 30 ppm
50	± 50 ppm
or specify	

**Remark:** Specifications are subject to change without prior notice. Please confirm with our sales engineer.

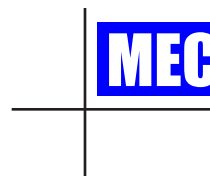
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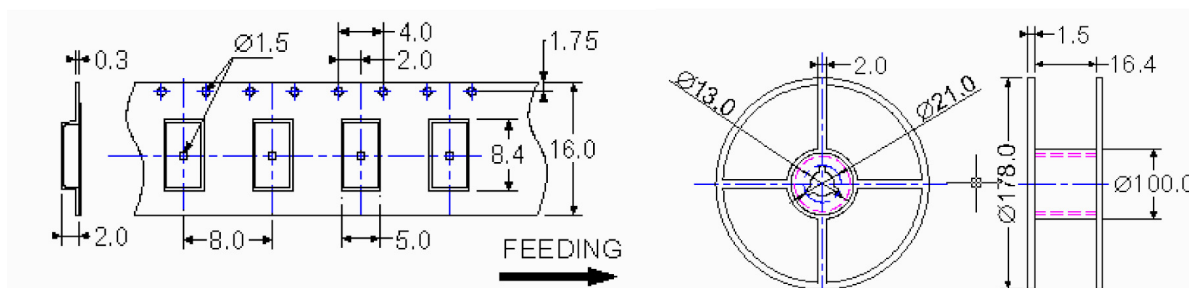


Glass Sealed Ceramic SMD Package (8 x 4.5 x 1.5mm)

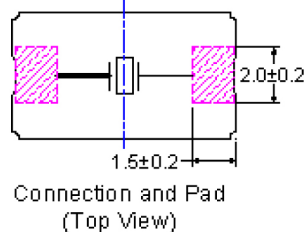
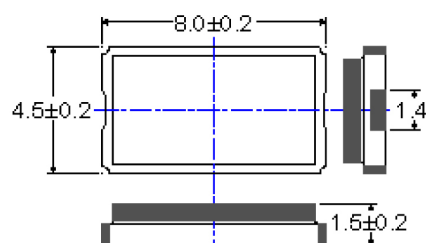
(2 Pad)



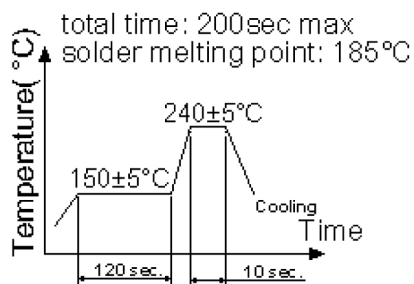
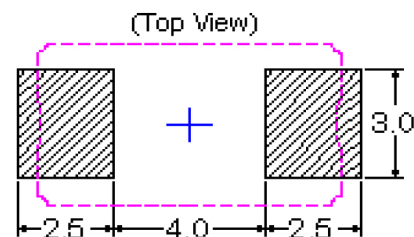
### Packing:



### Dimensions:



### Reference Land Pattern (Typical):



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