

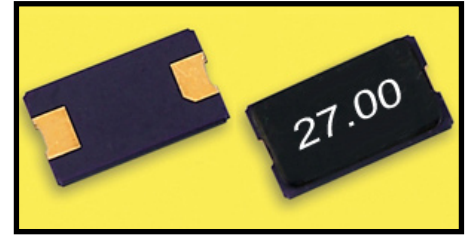
Quartz Crystal Unit

2MG Series

MEC Crystals

Glass Sealed Ceramic SMD Package (5.0 x 3.2mm)

(2 Pads)



Features:

- Ultra thin, thickness 1.0mm
- Leadless Type
- High precision characteristics covering up to high frequency range.
- Automatic mounting
- Embossed taping specifications
- Suitable for reflow soldering
- **RoHs Compliant (Pb Free)**

Electrical Specifications:

Frequency Range	8.000MHz ~ 54.000MHz
Frequency Tolerance (at 25°C)	±30ppm (Typical), or specify (±10ppm ~ ±50ppm available)
Frequency Stability Over Operating Temperature Characteristics	-10°C ~ 60° ±30ppm, -20°C ~ 70°C ±50ppm or specify
Operating Temperature Range	-20°C ~ +70°C Standard -40°C ~ +85°C Extended -10°C ~ +60°C Available
Storage Temperature Range	-40°C ~ +85°C
Shunt Capacitance (C0)	5.0pF max
Drive Level (Typical)	1~200µW Max. (100µW Typical)
Load Capacitance (CL)	Series, 16pF, 18pF, 20pF, 30pF, 32pF or specify
Equivalent Series Resistance ESR	see chart
Aging @ 25°C 1st year (Max)	±3ppm/year
Shock Resistance	Drop test of 3 times on 2mm stainless plate from 75cm height

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

Frequency Range	E.S.R. (Ω)	Mode
8.000MHz ~ 12.000MHz	80 max	Fundamental / AT
12.000MHz ~ 54.000MHz	50 max	Fundamental / AT

Part Numbering System:

2MG 16.000 F 16 X 10 30
① ② ③ ④ ⑤ ⑥ ⑦

① Series

2MG

② Frequency

Frequency
ex. 16.000

③ Mode of Vibration

Code	Cut-Mode
F	AT Fund
3	3rd Overtone
5	5th Overtone

④ Load Capacitance CL

Code	Load Capacitance
S	Series
16	16pF
18	18pF
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

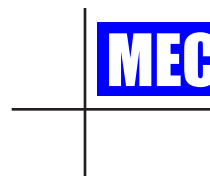
⑥ Frequency Tolerance

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

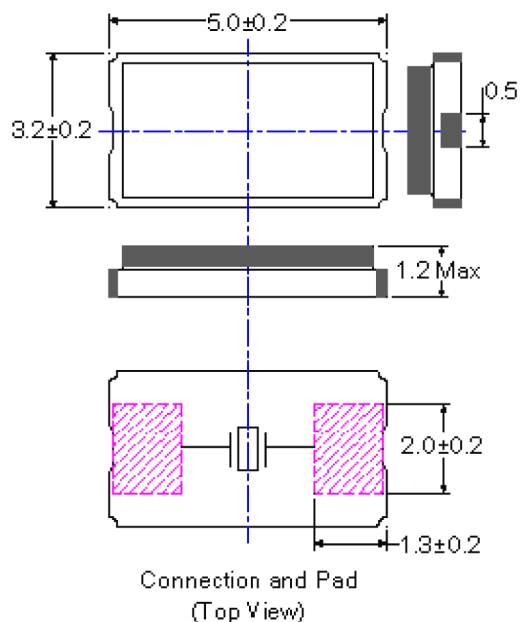
⑦ Frequency Stability

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

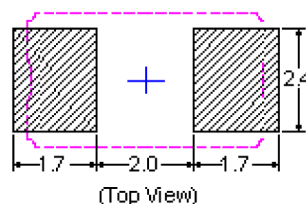
Remark: Specifications are subject to change without prior notice. Please confirm with our sales engineer.



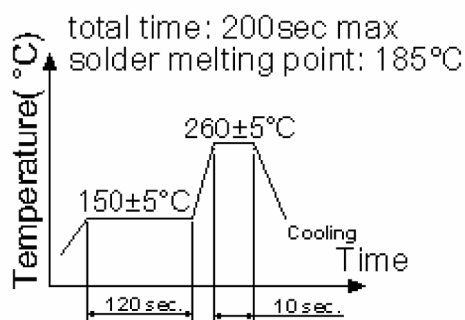
Dimensions:



Reference Land Pattern:



Reflow Condition:



Packing:

