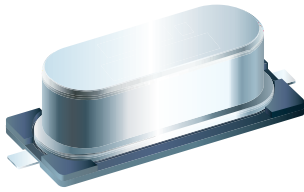




利 明 49MD 系列



Type 12.5 x 4.5 mm Crystal FEATURE

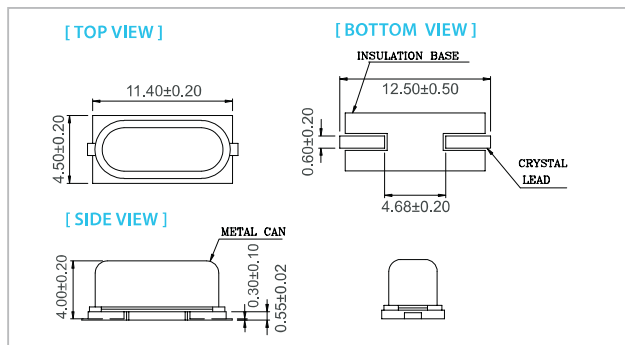
- Typical 12.5 x 4.5 x 4.0 mm metal can SMD package.
- 24mm width Tape & Reel package for automatic assembly.

TYPICAL APPLICATION

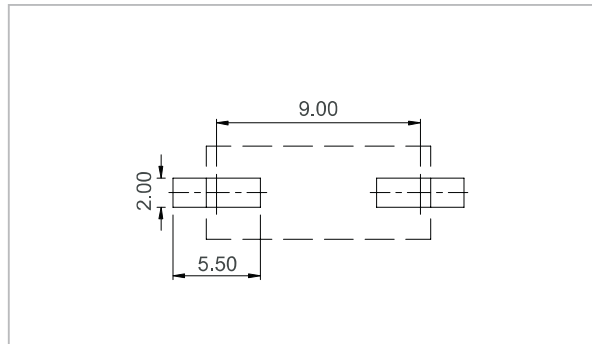
- Automotive
- Bluetooth, Wireless
- Computers, Modems, Communications
- Set-top Box, DECT/WDCT

Frequency range	3.00~100.00MHZ
Load Capacitance	Series, 6~32pf, or specify
Frequency Tolerance(at25 °C)	± 10 PPM± 20 PPM± 30 PPM or specify
Frequency stability Over Operating Temperature Range	± 10 PPM± 20 PPM± 30 PPM or specify
Operating Temperature Range	-20~+70°C -40~+85°C or specify
Storage Temperature Range	-40~+85°C
Shunt Capacitance(C0)	7pf-Max
Drive Level	1~1000uW (100uW typical)
Insulation Resistance	500m Minimum at 100VDC
Aging(at25°C)	± 3PPM/year Max.

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



ELECTRICAL SPECIFICATION

Parameter	Min.	Typical	Max.	Unit
Storage Temp. Range	-55	-	125	°C
Standard Frequency	4.096, 10.368, 16, 25, 32, 48			MHz
Level of Drive	-	10	800	µw
Shunt Capacitance (Co)	-	-	7.0	pF
Insulation Resistance	500 MΩ @ DC100V	-	-	
Aging (@25°C 1 st year)	±5.0			ppm / year

FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C) \ ppm	±5	±10	±15	±20
-10 ~ +60	×	○	○	○
-20 ~ +70	×	△	○	○
-40 ~ +85	×	×	×	○



Model Numbering Guide – Crystal Units

Available options

①		②	③	④		⑤					
Type	package (mm)	Frequency range	Load Capacitance (pF)	Freq. Tol. @25°C (ppm)	Freq. Stability (ppm)	Temp. Range(°C)	Special Requirement	Oscillator Mode	Appearance	Lead Free	Dash
1612	1.6x1.2	3.00~100.00MHZ	6	± 5	± 5	A:-20~+70 B:-40~+85 J:-40~+105	For Automotive Spurious Dld No special Pullability Several	AT Fundamental At3rd Overtone	Normal	RoHS Compliant	-
2016	2.0x1.6		7	± 10	± 10						
2520	2.5x2.0		8	± 15	± 15						
3225	3.2x2.5		9	± 20	± 20						
5032	5.0x3.2(4pads)		10	± 25	± 25						
6035	6.0x3.5		12	± 30	± 30						
3225	3.2x2.5(2pads)		15	± 40	± 40						
5032	5.0x3.2(2pads)		16	± 50	± 50						
8045	8.0x4.5		18	± 100	± 100						
49S	11.1x4.68		20	± 150	± 150						
49SS	11.05x4.65x2.5		22								
49MD	13.0x4.85		25								
49SSMD	12.2x4.8x3.0		30								
			32								

产品编号：

□ — □ — □ — □ — □

① 型号 ② 频率 ③ 负载电容 ④ 频率稳定度(X10⁻⁶, +25°C) ⑤ 温度

范例： 49MD-12.00-20-20-20/A

① ② ③ ④ ⑤

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