



SMD Quartz Crystal - SMD Tuning Fork

SMD Type Crystal - SMD 3.8 x 8.0mm

• Features

- Low cost & wide applications
- Low power consumption
- RoHS compliant

• General Specification

Type	SMD 3.8 x 8.0
Frequency available	32.00KHz, 32.768KHz, 40.00KHz, 75.00KHz, 76.80KHz
Frequency Tolerance at 25°C	± 20ppm, ± 30ppm, ± 50ppm, ± 100ppm
Temperature Coefficient	-0.034 ± 0.006ppm/°C ²
Operating Temperature	-10 °C to +60 °C *
Load Capacitance	6.0 to 12.5pF
Shunt Capacitance	<1.8pF *
Storage Temperature	-40°C to +85°C *
Drive Level	1.0μW *
Aging	± 5ppm max first year *

* Can be changed according to Customer's requirement.

• Drive Level Codes (μW)

M = 1.0	B = 200	D = 50	E = 300	G = 500	I = 10
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• Load Capacitance Codes

12pF = A	12.5pF = B	6pF = a	8pF = e
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• Operating Temperature Codes (°C)

A = -10 to +60	B = -20 to +70	C = -10 to +70
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• Frequency Tolerance Codes (ppm)

S = ±20	T = ±30	U = ±50	V = ±100
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Pls contact us for the parameters you could not find in these tables.

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• ESR (Series Resistance R_s) vs Standard Frequency

Frequency Range (KHz)	ESR Max ($K\Omega$)	Code
30.000 - 200.000	50	e

• Marking

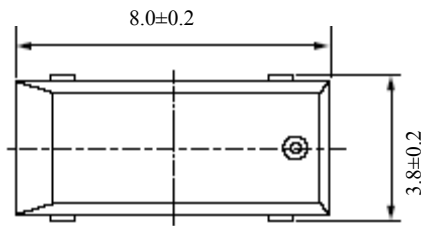
32.768

• Ordering Information

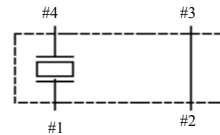
Drive Level (μ W)	Load Capacitance (pF)	Operating Temperature ($^{\circ}$ C)	Frequency Tolerance (ppm)	ESR ($K\Omega$)	Type	Vibration Mode	Frequency (KHz)	Lead-free	Packing
See Tables					T = SMD 3.8 x 8.0	Blank=N/A	xx.xxxK	LF	TR
1.0	12.5	-20 to +70	± 20	50				Lead-free	Tape & reel
M	B	B	S	e	T			LF	TR

For Example: **MBBSeT-32.768KLF/TR**

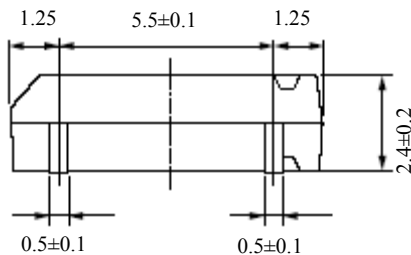
• Dimensions



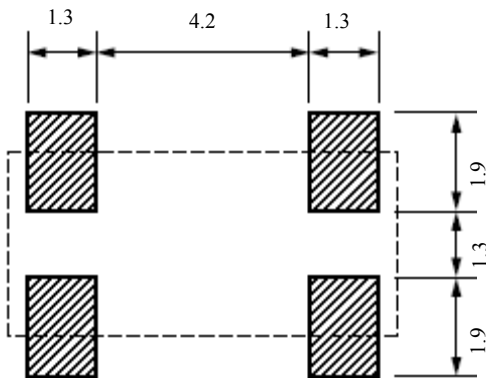
Top View



#1 Crystal
#2 N/C
#3 N/C
#4 Crystal
Do not connect to external with #2 and #3.



Side View

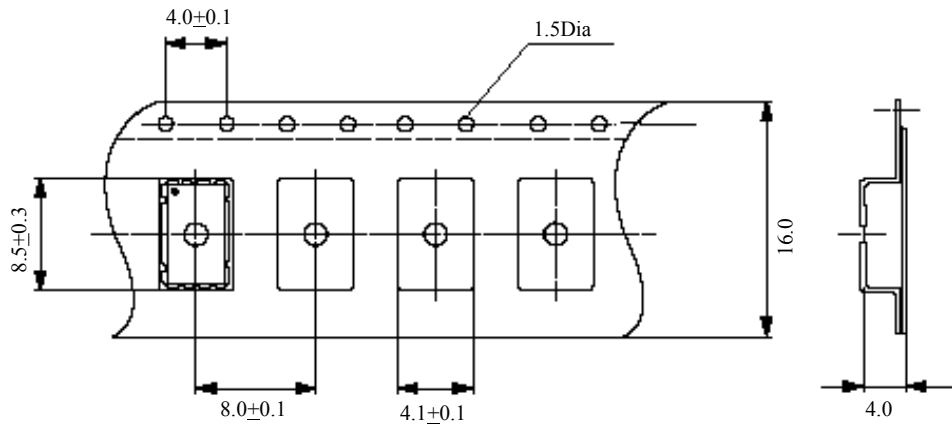


Pad Layout

in mm

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• Taping Specification



* Reel Quantity: 1,000pcs

in mm

• Reflow Soldering Profile

