

# PRODUKT-INFO

## CM-415 SMD CRYSTAL (UHRENQUARZ) TUNING FORK CRYSTAL

### FEATURES

1. Ceramic package of tuning fork crystal units.
2. Ultra miniature and thin type. Best for high density circuit boards.

### APPLICATION

Its low power consumption makes it ideal for application in portable equipments. Perfect for Pb-free products.

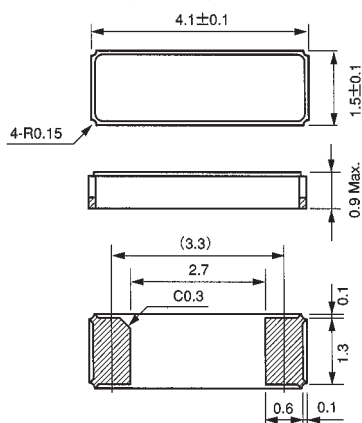


Actual Size

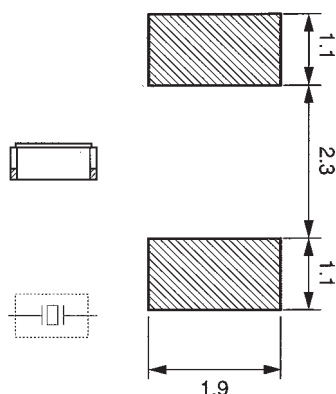


ELECTRICAL SPECIFICATIONS	
Model	CM-415
Nominal Frequency	32.768 kHz
Frequency Tolerance (at +25°C)	±20 ppm
Load Capacitance (C <sub>L</sub> )	9.0 pF, 12.5 pF typical
Temperature Coefficient	-0.034±0.006 ppm/°C <sup>2</sup> typical
Equivalent Series Resistance (at +25°C)	70 kΩ max.
Drive Level	1 μW max.
Operating Temperature Range	-40°C to +85°C
Storage Temperature Range	-55°C to +125°C
Turnover Temperature	+25°C ±5°C
Aging (at +25°C) first year	±3 ppm max.
Shunt Capacitance	1.10 pF typical
Q-Factor	53000 typical

Dimensions (Units: mm)

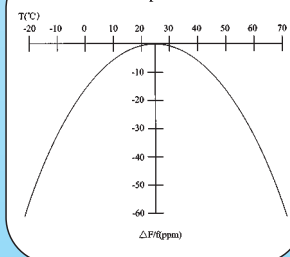


Recommended Solder Pattern



4.1 x 1.5 x 0.9

Parabolic Temperature Curve



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and more*

Now available



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All specifications subject to change without notice.