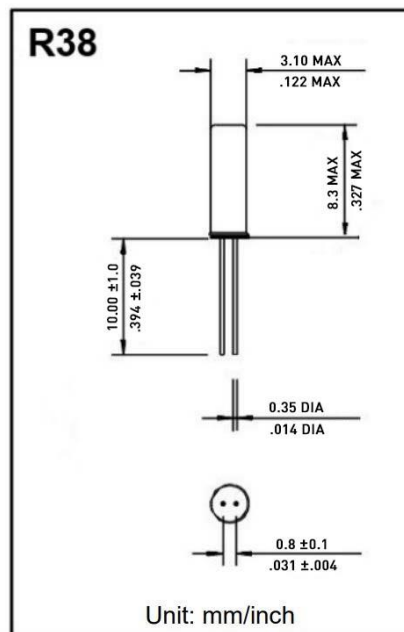


● ELECTRICAL SPECIFICATIONS

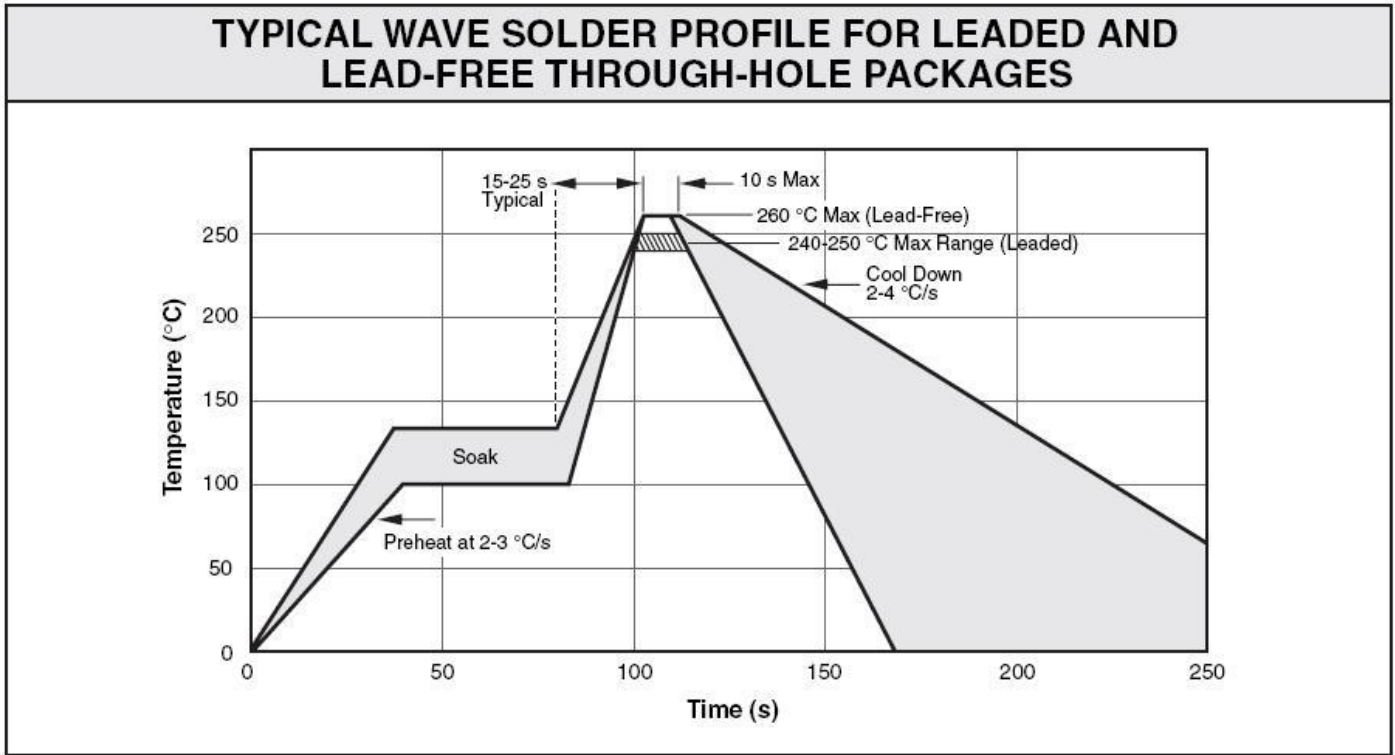
PARAMETER	VALUE
NOMINAL FREQUENCY	32.768 kHz
FREQUENCY TOLERANCE AT 25°C	±20 ppm max
TURNOVER TEMPERATURE	25°C ± 5°C
PARABOLIC CURVATURE CONSTANT	-0.034 ppm/Δ°C ²
LOAD CAPACITANCE	12.5 pF
EQUIVALENT SERIES RESISTANCE	35 kΩ max
DRIVE LEVEL	1.0 μW typ
MOTIONAL CAPACITANCE	0.0035 pF typ
SHUNT CAPACITANCE	1.6 pFtyp
CAPACITANCE RATIO	460 typ
AGING	±3 ppm first year max
QUALITY FACTOR TYP	90000 typ
INSULATION RESISTANCE	500 MΩ min
OPERATING TEMPERATURE RANGE	-20°C to +70°C
STORAGE TEMPERATURE RANGE	-40°C to +85°C
SHOCK RESISTANCE	±5 ppm max 75 cm drop test in onto a hard wood surface

● MECHANICAL SPECIFICATION



NOTE: Through hole device, can withstand 245°C soldering by terminals only

● WAVE SOLDER PROFILE



Wave Solder profile		
Profile Feature	SnPb eutectic	Pb-Free
Average ramp-up rate	~200°C/second	~200°C/second
Heating Rate during preheat	typical 1-2°/second max 4°/second	typical 1-2°/second max 4°/second
Final preheat temperature, T _S	~130°C	~130°C
Peak temperature, T _P	235°C	260°C
Time within +0°C / -5°C of actual temperature, t _P	10 seconds	10 seconds
Ramp-down rate	5°C/second max.	5°C/second max.

NOTE: This document should serve as recommendation only. Other parameters may also affect soldering, this profile does not guarantee absolute success. Soldering profile should be determined by the equipment manufacturer and customers' process engineer.

● ENVIRONMENTAL

PARAMETER	VALUE
MOISTURE SENSITIVITY LEVEL	1
RoHS	Compliant
REACH SVHC	Compliant
HALOGEN-FREE	Compliant
ESD CLASSIFICATION LEVEL	N/A
TERMINATION FINISH	Sn





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TUNING FORK CRYSTAL

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● **APPROVAL**

DRAWN BY:	CP, June 04, 2015
APPROVED BY:	CP, June 04, 2015
REVISION:	A, Initial Release
	B Updated to current spec levels JH 8/20/19
	C. Updated to current spec level AG 3/19/2020

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