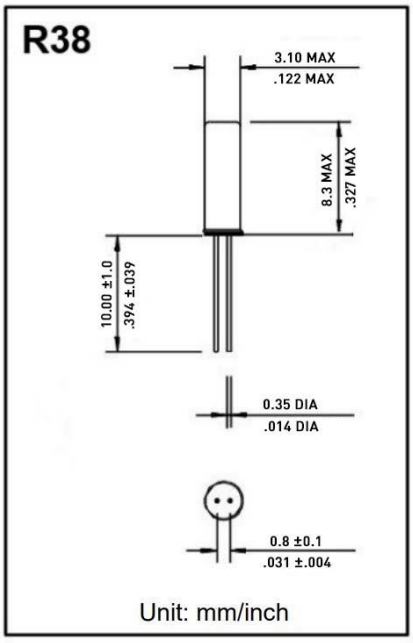
R38-32.768-12.5-EXT-5PPM Rev B

ELECTRICAL SPECIFICATIONS

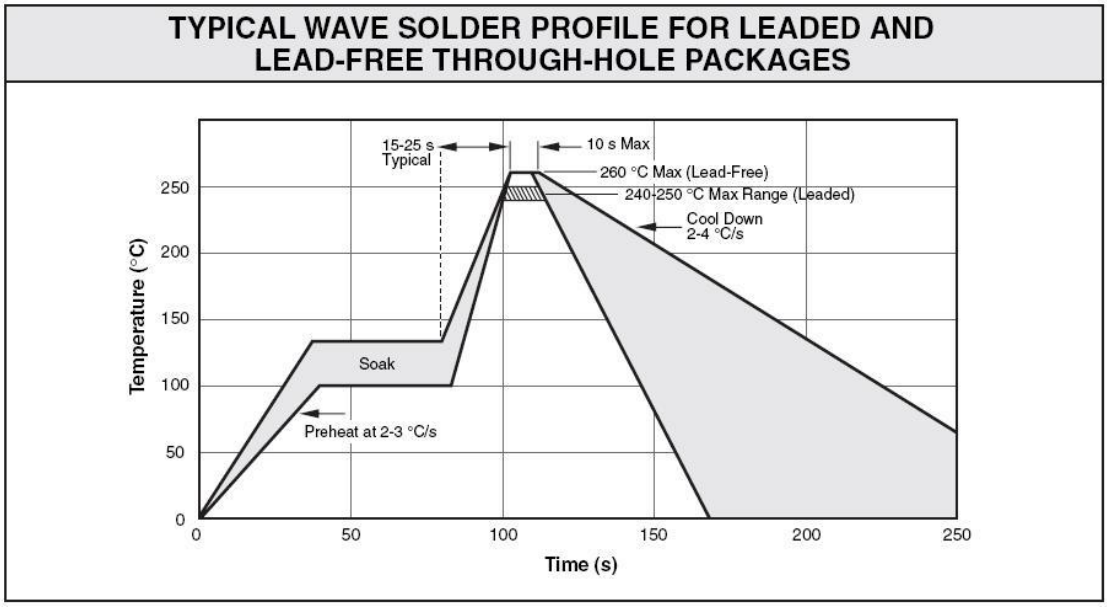
PARAMETER	VALUE
NOMINAL FREQUENCY	32.768 kHz
FREQUENCY TOLERANCE AT 25°C	±5 ppm max
TURNOVER TEMPERATURE	25°C ± 5°C
PARABOLIC CURVATURE CONSTANT	-0.034 ±0.006 ppm/Δ°C^2
LOAD CAPACITANCE	12.5 pF
EQUIVALENT SERIES RESISTANCE	30 kΩ max
DRIVE LEVEL	1 µW max
MOTIONAL CAPACITANCE	3.5 fF typ
SHUNT CAPACITANCE	1.6 pF typ
CAPACITANCE RATIO	460 typ
AGING	±3 ppm first year max
QUALITY FACTOR	60,000 typ
INSULATION RESISTANCE	500 MΩ min
OPERATING TEMPERATURE RANGE	-40°C to +85°C
STORAGE TEMPERATURE RANGE	-40°C to +85°C

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

APPROVAL

DRAWN BY:	KJackson, March 31, 2016
APPROVED BY:	KJackson, March 31, 2016
REVISION:	A, Initial Release B, Updated to current spec levels by XLiu, November 20, 2019