

SMD WATCH CRYSTAL 32.768 kHz

SERIES M1610 STANDARD (2 pad housing 1.6x1.0mm)

FEATURES

- + Smallest available low cost watch crystal
- + Extended operating temperature range of up to -40/+125°C
- + Excellent shock-resistance
- + Designed for the use in wireless, wearable, communication, automotive, etc.

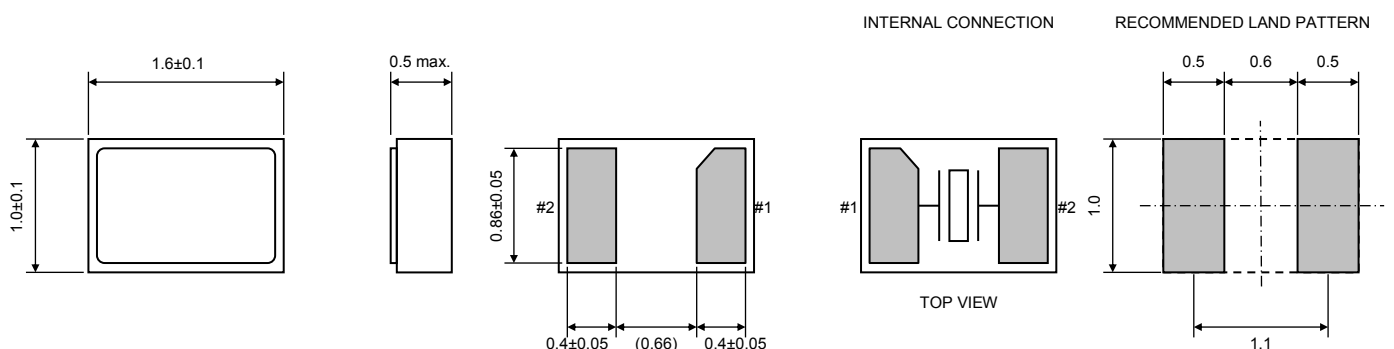


GENERAL DATA

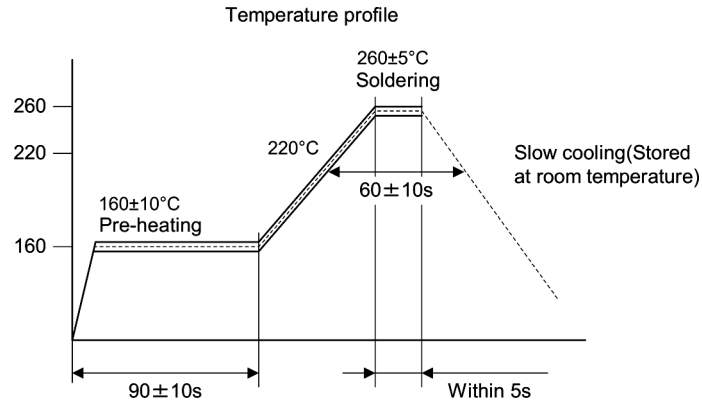
PB FREE / ROHS COMPLIANT

PARAMETERS	PRODUCT FEATURES AND CONDITIONS
SMD-CRYSTAL SERIES	M1610
NUMBER OF SOLDER PADS	2
FREQUENCY RANGE	32.768 kHz
FREQUENCY TOLERANCES AT 25°C	±20 ppm (standard) / ±10 ppm ~ ±100 ppm (option)
LOAD CAPACITANCE (C _L)	12.5 pF (standard) 5.0, 7.0 and 9.0 pF available on request
WORKING TEMPERATURE RANGE	-40/+85°C or -40/+105° or -40/+125°
RESONANCE RESISTANCE	90 kΩ max.
SHUNT CAPACITANCE (C _s)	1.3 pF typ.
TURNOVER TEMPERATURE	+25°C ±5°C
PARABOLIC COEFFICIENT	-0.03±0.01 ppm/°C ²
DRIVE LEVEL	0.5 μW max.
AGING	±3 ppm max. per year
INSULATION RESISTANCE	>500 MΩ DC/100V ±10%
STORAGE TEMPERATURE	-55°/+125°C
DELIVERY FORM	Tape and Reel (5.000 pcs per reel)
SELECT YOUR REQUIRED CRYSTAL (PRODUCT CONFIGURATOR)	REQUEST CRYSTAL SAMPLES (SAMPLE CONFIGURATOR)

DIMENSIONS

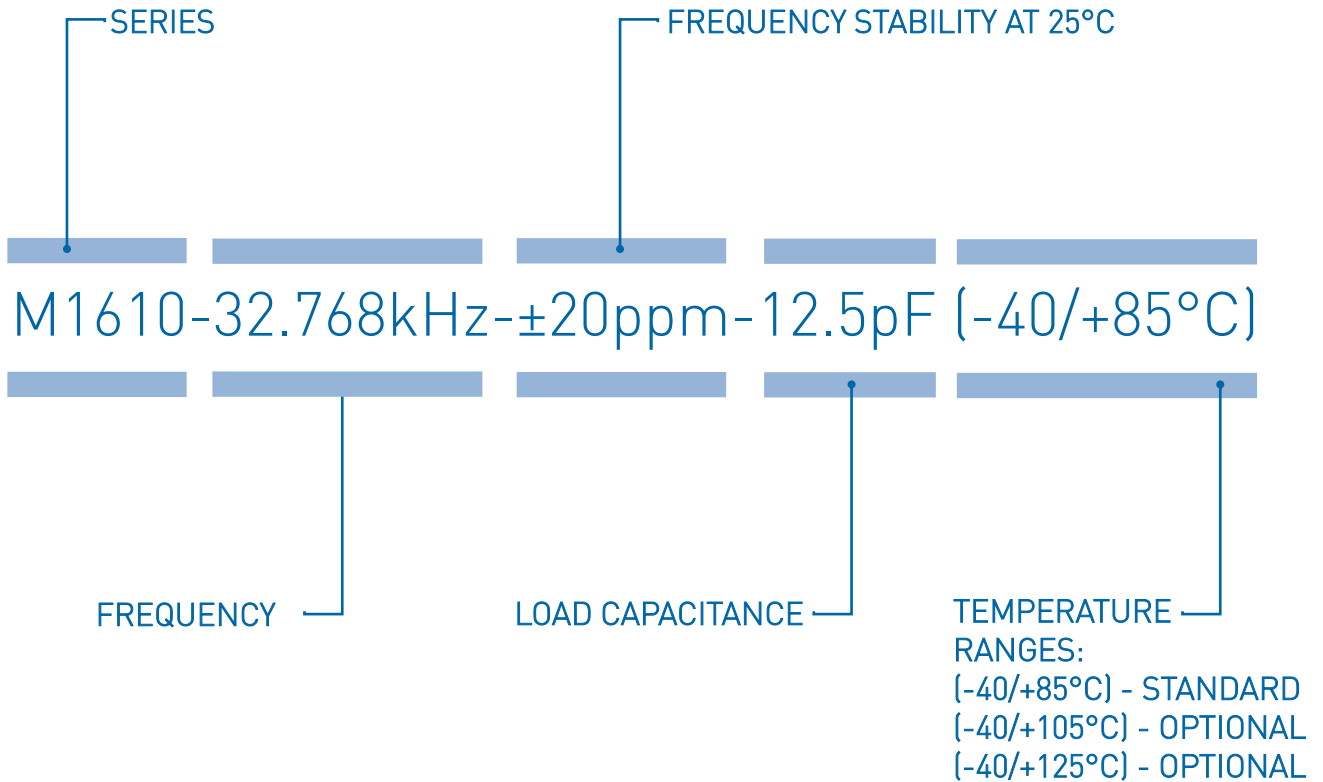


REFLOW SOLDER PROFILE



Peak temperature: $260 \pm 5^\circ\text{C}$ for within 5 seconds. Soldering temperature: 220°C or higher for 60 ± 10 seconds.
Pre-heating temperature: $160 \pm 10^\circ\text{C}$ for 90 ± 10 seconds. Quartz crystal units which is put on PCB shall be through reflow soldering furnace twice with the condition shown above.

ORDERING INFORMATION



EXAMPLE: M1610-32.768kHz-±20ppm-12.5pF (-40/+85°C)

PLEASE INDICATE YOUR REQUIRED PARAMETERS



REVISION HISTORY^[1]

REVISION	RELEASE DATE	AMENDMENTS SUMMARY
01	February 2018	+ Added two temperature ranges: 40/+105°C and -40/+125°C + Revised load capacitance + Revised shunt capacitance

Note:

1. Based on Datasheet version from May 2015/SPEC 01/REV.00



PREMIUM QUALITY BY PETERMANN-TECHNIK



OUR COMPANY IS CERTIFIED ACCORDING TO ISO 9001:2015 IN OCTOBER 2016 BY THE DMSZ CERTIFIKATION GMBH.

THIS IS FOR YOU TO ENSURE THAT THE PRINCIPLES OF QUALITY MANAGEMENT ARE FULLY IMPLEMENTED IN OUR QUALITY MANAGEMENT SYSTEM AND QUALITY CONTROL METHODS ALSO DOMINATE OUR QUALITY STANDARDS.