

PETERMANN-TECHNIK GmbH Lechwiesenstr. 13 • D-86899 • Landsberg am Lech Tel: +49/8191/305395 • Fax: +49/8191/305397 info@petermann-technik.com • www.petermann-technik.com



# SMD WATCH CRYSTAL 32.768 kHz

SERIES M4819 STANDARD (2 pad housing 4.8x1.9mm)

#### **FEATURES**

- + Smallest available low cost watch crystal
- + Ultra low profile

**GENERAL DATA** 

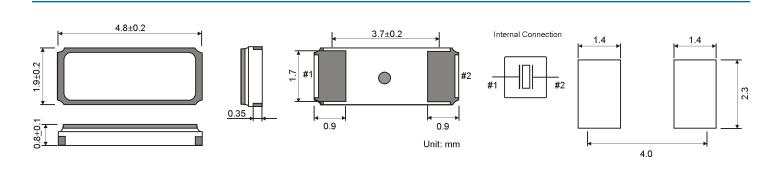
- + Standard operating temperature range of -40/+85°C
- + Excellent clock generator for CPU's, Wireless, Mobile Comm., etc.



#### PB FREE / ROHS-2 2011/65/EU COMPLIANT

PARAMETERS	PRODUCT FEATURES AND CONDITIONS
SMD-CRYSTAL SERIES	M4819
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 (CL)	12.5 pF (standard) 7,8,9 and 12pF available on request
WORKING TEMPERATURE RANGE	-40/+85°C
RESONANCE RESISTANCE	80 kΩ max.
SHUNT CAPACITANCE (C <sub>0</sub> )	1.15 pF typ.
TURNOVER TEMPERATURE	+25°C ±5°C
PARABOLIC COEFFICIENT	-0.04 ppm/°C²
DRIVE LEVEL	0.5 μW typical (1.0 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 (1.000 ~ 3.000 pcs per reel)
OTHER PARAMETERS ARE AVAILABLE ON REQUEST / CREATE HERE YOUR SPECIFICATION	

### DIMENSIONS

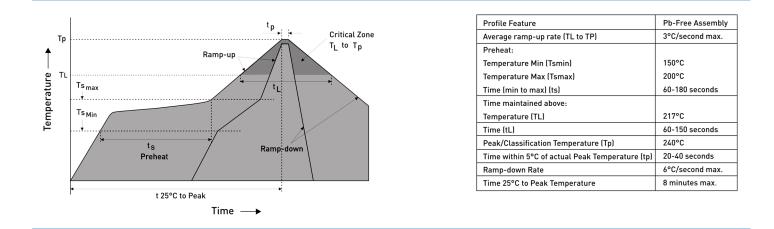




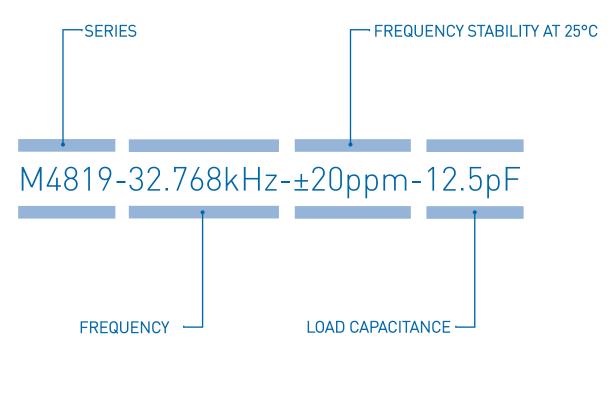
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# **REFLOW SOLDER PROFILE**



#### **ORDERING INFORMATION**



## EXAMPLE: M4819-32.768kHz-±20ppm-12.5pF PLEASE INDICATE YOUR REQUIRED PARAMETERS



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# PREMIUM QUALITY BY PETERMANN-TECHNIK



OUR COMPANY IS CERTIFIED ACCORDING TO ISO 9001:2008 IN OC-TOBER 2013 BY THE DMSZ CERTIFIKATION GMBH.

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

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