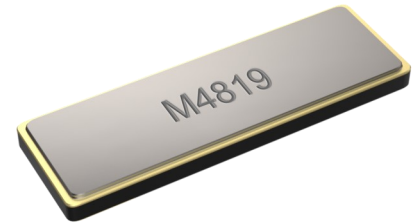


SMD WATCH CRYSTAL 32.768 kHz

SERIES M4819 STANDARD (2 pad housing 4.8x1.9x1.0mm)

FEATURES

- + Ultra low profile 32.768 kHz crystal
- + Standard operating temperature range of -40/+85°C
- + Excellent clock generator for CPU's, Wireless, Mobile Comm., etc.

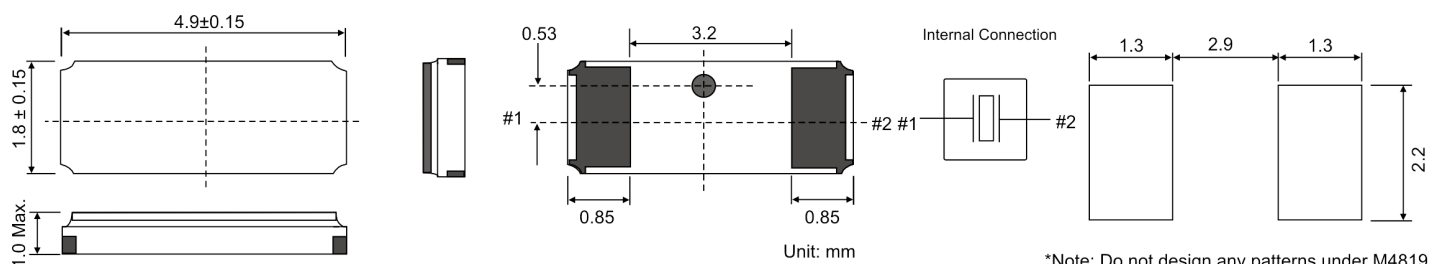


GENERAL DATA

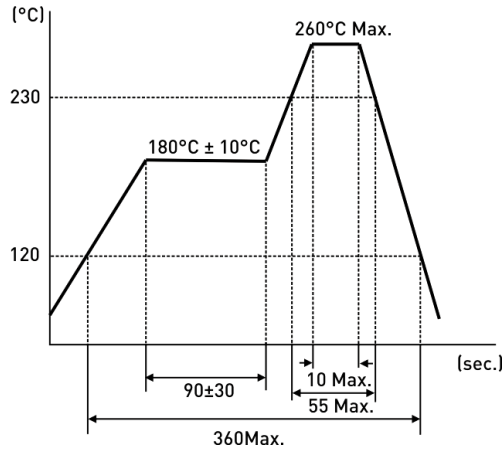
PB FREE / ROHS COMPLIANT

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 (C _L)	12.5 pF (standard) 6, 7 and 9 pF available on request
WORKING TEMPERATURE RANGE	-40/+85°C
RESONANCE RESISTANCE	70 kΩ max.
SHUNT CAPACITANCE (C _s)	1.35 pF typ.
TURNOVER TEMPERATURE	+25°C ±5°C
TEMPERATURE COEFFICIENT	-0.034 ± 0.006ppm/°C ²
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 (3.000 pcs per reel)
SELECT YOUR REQUIRED CRYSTAL (PRODUCT CONFIGURATOR)	REQUEST CRYSTAL SAMPLES (SAMPLE CONFIGURATOR)

DIMENSIONS



REFLOW SOLDER PROFILE



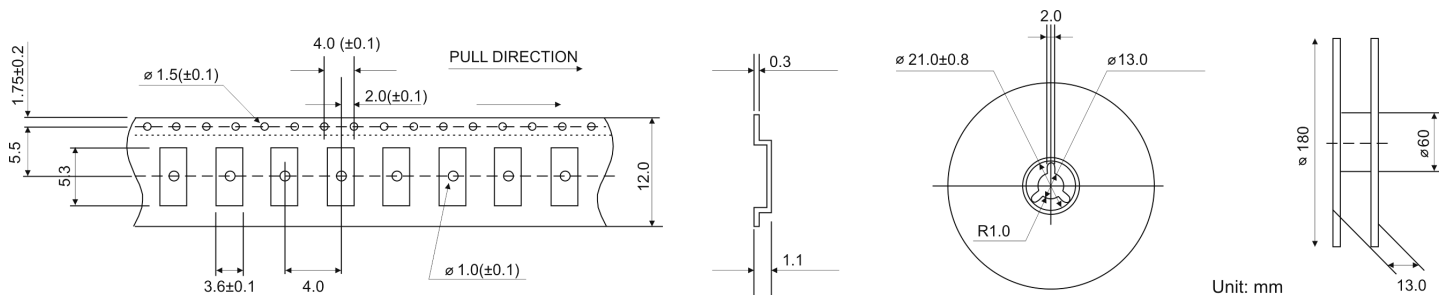
MARKING



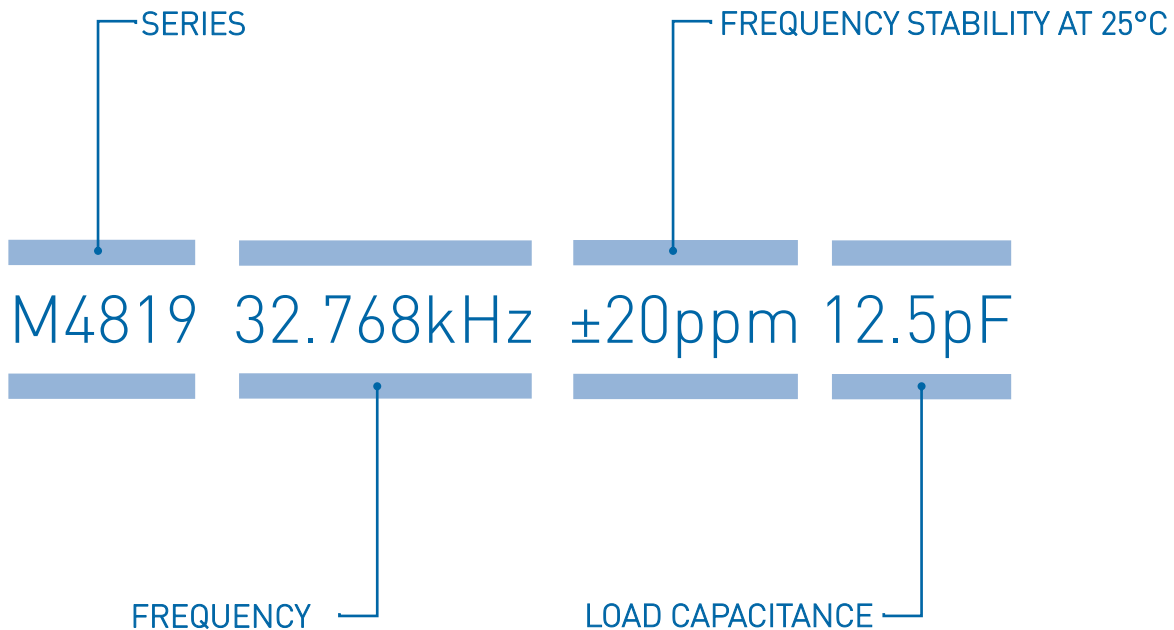
C: Product's ID Code
 Y: The last digit of production year
 m: Production month (See Table. 1)
 #: Production Lot No.

Month	Jan	Feb	...	Sep	Okt	Nov	Dec
Code	1	2	...	9	X	Y	Z

REEL SPECIFICATION



ORDERING INFORMATION



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



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.

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