

SMD QUARTZ CRYSTAL

Please do not use this housing for new design.
Please use SMD0603/4 housing

SERIES SMD0603/2 (2 pad housing 6.0x3.5mm)

FEATURES

- + Large frequency spectrum available
- + All ceramic epoxy sealed SMD package
- + Do not use for new designs—please use SMD0603/4 for new design
- + Low profile—1.1 mm max. package height
- + Extended temperature range to -40/+125°C available
- + Excellent clock generator for CPU's, Wireless, Mobile Comm., etc.



PB FREE / ROHS COMPLIANT

GENERAL DATA

PARAMETERS	PRODUCT FEATURES AND CONDITIONS
SMD-CRYSTAL SERIES	SMD0603/2
NUMBER OF SOLDER PINS	2 (Please do not use this housing for new design. Please use SMD0603/4)
FREQUENCY RANGE	8.0 ~ 40.0 MHz AT-Fundamental 40.1 ~ 160.0 MHz 3rd Overtone AT-cut
FREQUENCY TOLERANCES AT 25°C	±10 ppm ~ ±30 ppm (±30 ppm standard)
LOAD CAPACITANCE (C _L)	10 pF ~ 32 pF or Series Resonance
WORKING TEMPERATURE RANGES	-20/+70°C ~ -40/+125°C
EQUIVALENT SERIES RESISTANCE	See ESR table
SHUNT CAPACITANCE (C ₀)	7 pF max.
DRIVE LEVEL	100 µW typ. / 500 µW max.
AGING	±3 ppm per year max.
INSULATION RESISTANCE	>500 MΩ DC/100V ±15%
STORAGE TEMPERATURE	-55°/+125°C
DELIVERY FORM	Tape and Reel (1.000 pcs per reel)
OTHER PARAMETERS ARE AVAILABLE ON REQUEST / CREATE HERE YOUR SPECIFICATION	

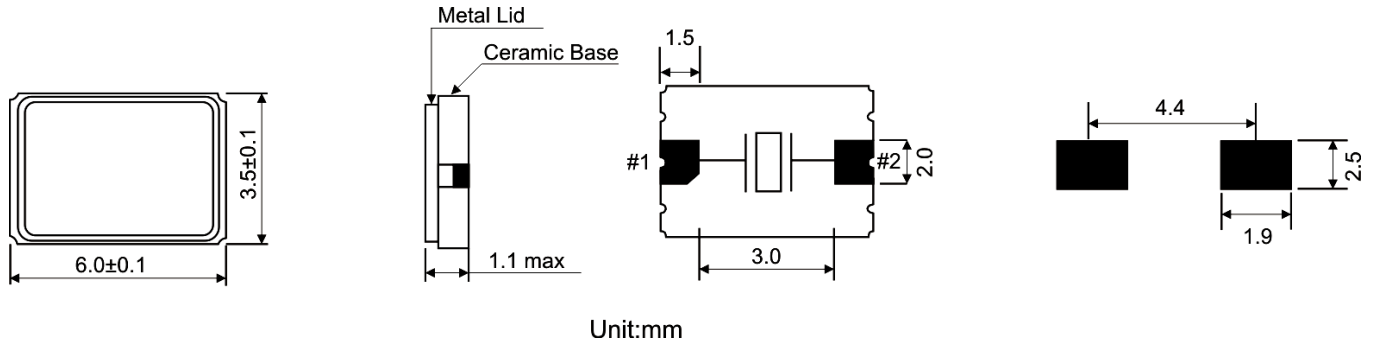
FREQUENCY STABILITY VS. TEMPERATURE

	±10ppm	±20ppm	±30ppm	±50ppm	±100ppm
-20°/+70°C	+	+	+	+	+
-40°/+85°C	+*	+	+	+	+
-40°/105°C				+	+
-40°/+125°C					+
*Operating Temperature -30°/+80°C					

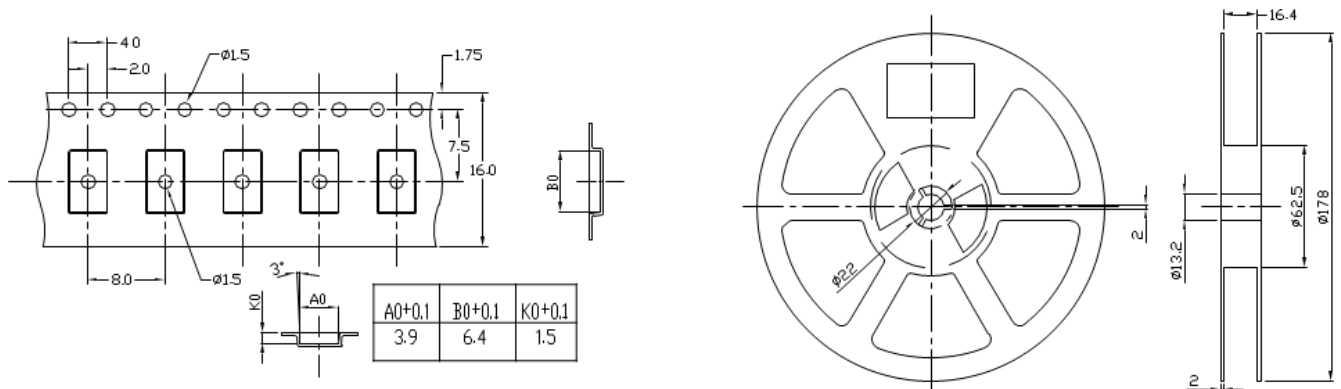
Note:

1. The reference temperature for all specified values and tests is +25°C.

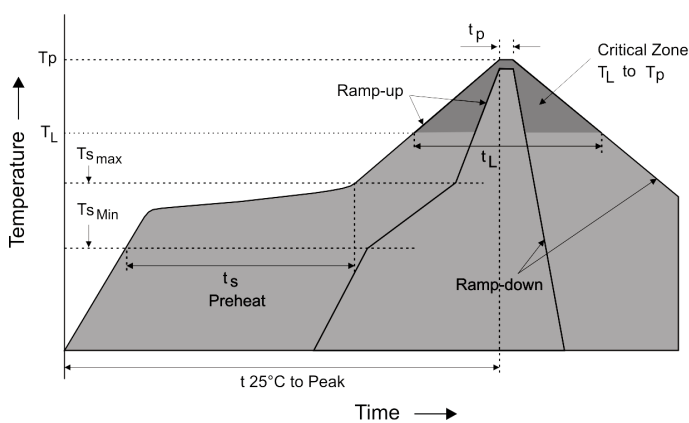
DIMENSIONS SMD0603/2



REEL SPECIFICATION



REEL SOLDER PROFILE

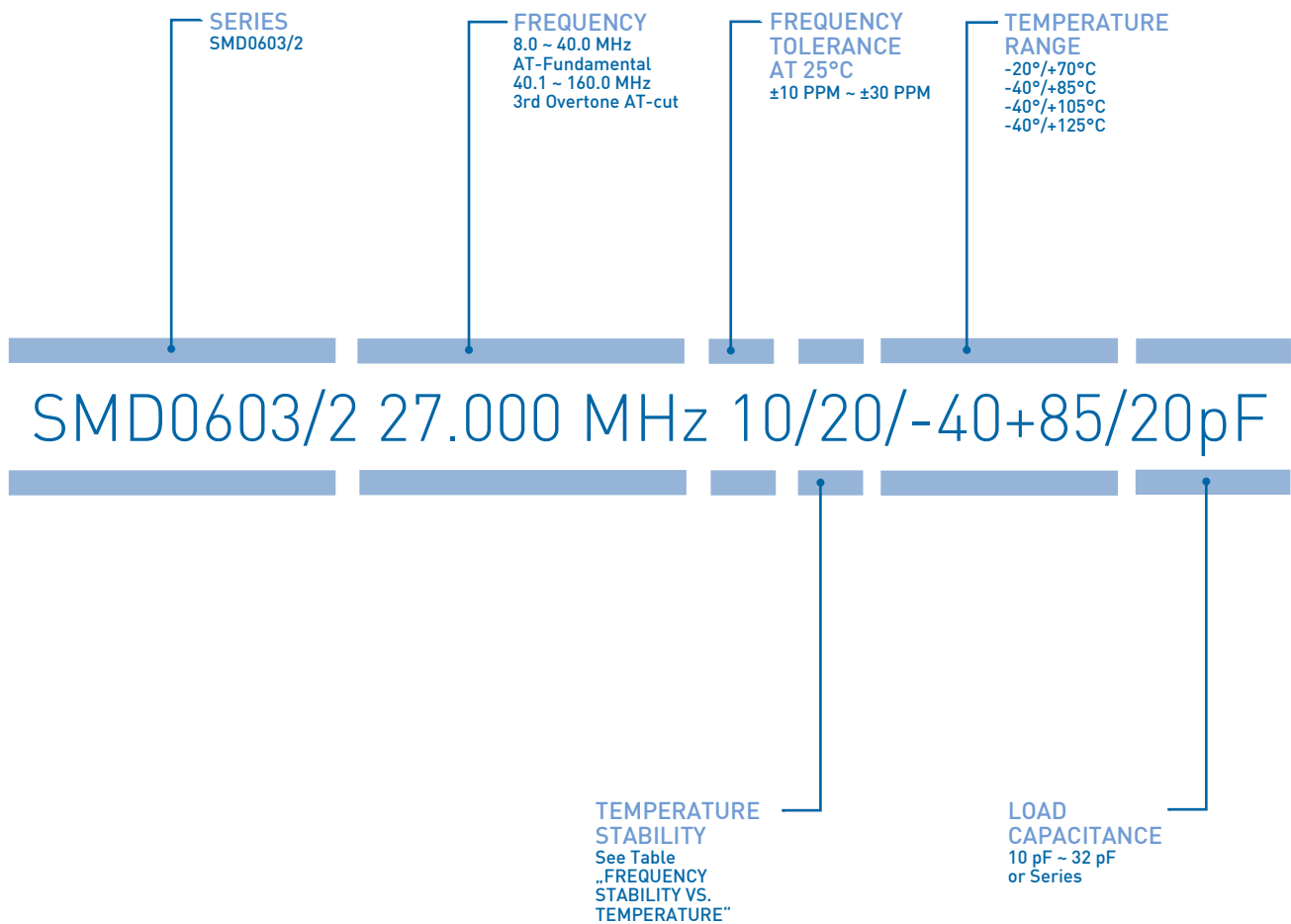


Preheat	
- Temperature Minimum (T _s MIN)	150°C
- Temperature Maximum (T _s MAX)	180°C
- Time (t _s)	60 - 120 seconds
Time Maintained Above:	
- Temperature (T _L)	217°C
- Time (t _L)	45 - 90 seconds
Peak Temperature (T _p)	260°C Maximum
Time within actual peak (t _p)	10 seconds maximum

EQUIVALENT SERIES RESISTANCE

FREQUENCY IN MHz	VIBRATION MODE	ESR MAX. IN Ω
8.0 ~ 12.0 MHz	AT Fund.	80 max.
12.1 ~ 16.0 MHz	AT Fund.	60 max.
16.1 ~ 40.0 MHz	AT Fund.	40 max.
40.1 ~ 160.0 MHz	3rd OT AT-cut	70 max.

ORDERING INFORMATION



EXAMPLE: SMD0603/2 27.000 MHz 10/20/-40+85/20pF
PLEASE INDICATE YOUR REQUIRED PARAMETERS



REVISION HISTORY^[2]

VERSION	RELEASE DATE	AMENDMENTS SUMMARY
01	10/25/2016	<ul style="list-style-type: none"> + increased Frequency Range + Updated Frequency Tolerances + Updated Load Capacitances + Updated Dimensions + Updated Reel Specification + Updated Soldering Profile + Increased Working Temperature Ranges + Updated ESR values + Updated Drive Level + Updated Aging values + Updated Frequency Stability vs. Temperature table

Note:

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



PREMIUM QUALITY BY PETERMANN-TECHNIK



OUR COMPANY IS CERTIFIED ACCORDING TO ISO 9001:2008 IN OCTOBER 2013 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.