

# SMD QUARTZ CRYSTAL

SERIES SMD1045/4 (4 pad housing 10.0x4.5mm)

## FEATURES

- + Low frequencies available
- + All ceramic epoxy sealed SMD package
- + Low profile—1.4 mm max. package height
- + Extended temperature range to -40/+85°C available
- + Excellent clock generator for CPU's, Wireless, Mobile Comm., etc.



ROHS COMPLIANT

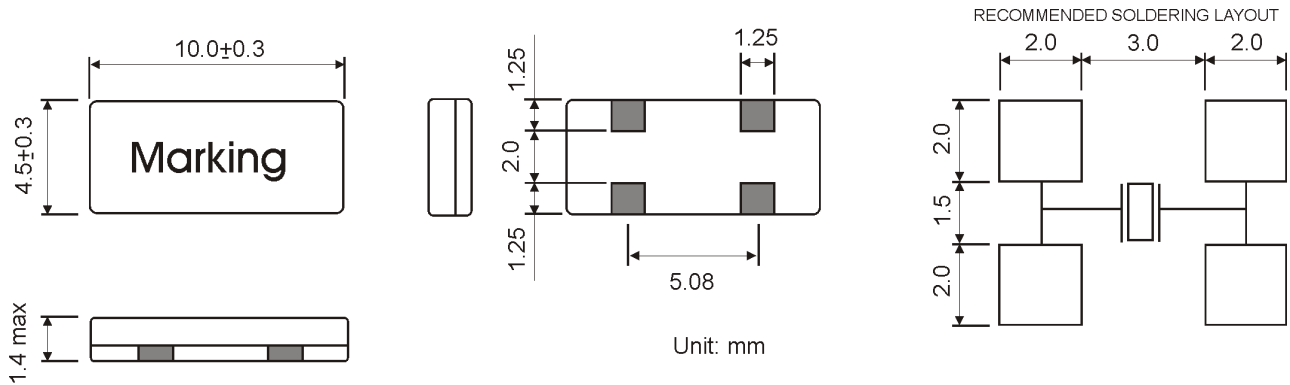
## GENERAL DATA

PARAMETERS	PRODUCT FEATURES AND CONDITIONS
SMD-CRYSTAL SERIES	SMD1045/4
NUMBER OF SOLDER PADS	4
FREQUENCY RANGE	3.2768 ~ 10.0 MHz AT-Fundamental
FREQUENCY TOLERANCES AT 25°C	±20 ppm ~ ±50 ppm
LOAD CAPACITANCE (C <sub>L</sub> )	10 pF ~ 30 pF or Series, 18 pF standard
WORKING TEMPERATURE RANGE	0/+50°C ~ -40/+85°C
SHUNT CAPACITANCE (C <sub>0</sub> )	7.0 pF max.
DRIVE LEVEL	0.1 mW max. standard (optional 0.5 mW available)
AGING	±5 ppm per year standard
INSULATION RESISTANCE	>500 MΩ DC/100V ±10%
STORAGE TEMPERATURE	-55°/+125°C
DELIVERY FORM	Tape and Reel (1.000 pcs per reel)
<a href="#">SELECT YOUR REQUIRED CRYSTAL (PRODUCT CONFIGURATOR)</a>	<a href="#">REQUEST CRYSTAL SAMPLES (SAMPLE CONFIGURATOR)</a>

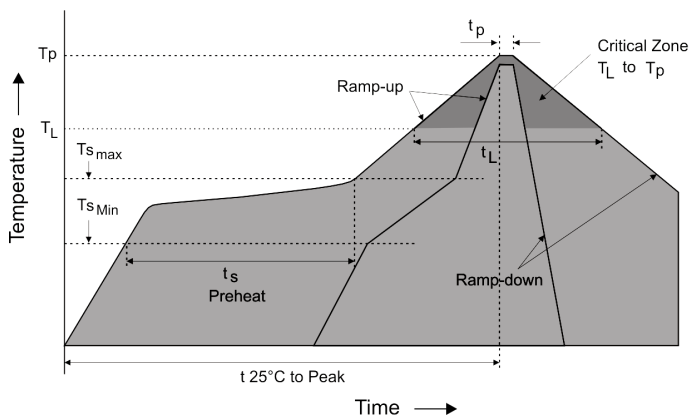
## FREQUENCY STABILITY VS. TEMPERATURE

	±15ppm	±20ppm	±30ppm	±50ppm
0°/+50°C	+	+	+	+
-10°/+60°C	+	+	+	+
0°/+70°C	+	+	+	+
-20°/+70°C	+	+	+	+
-40°/+85°C		+	+	+

## DIMENSIONS



## REFLOW SOLDER PROFILE

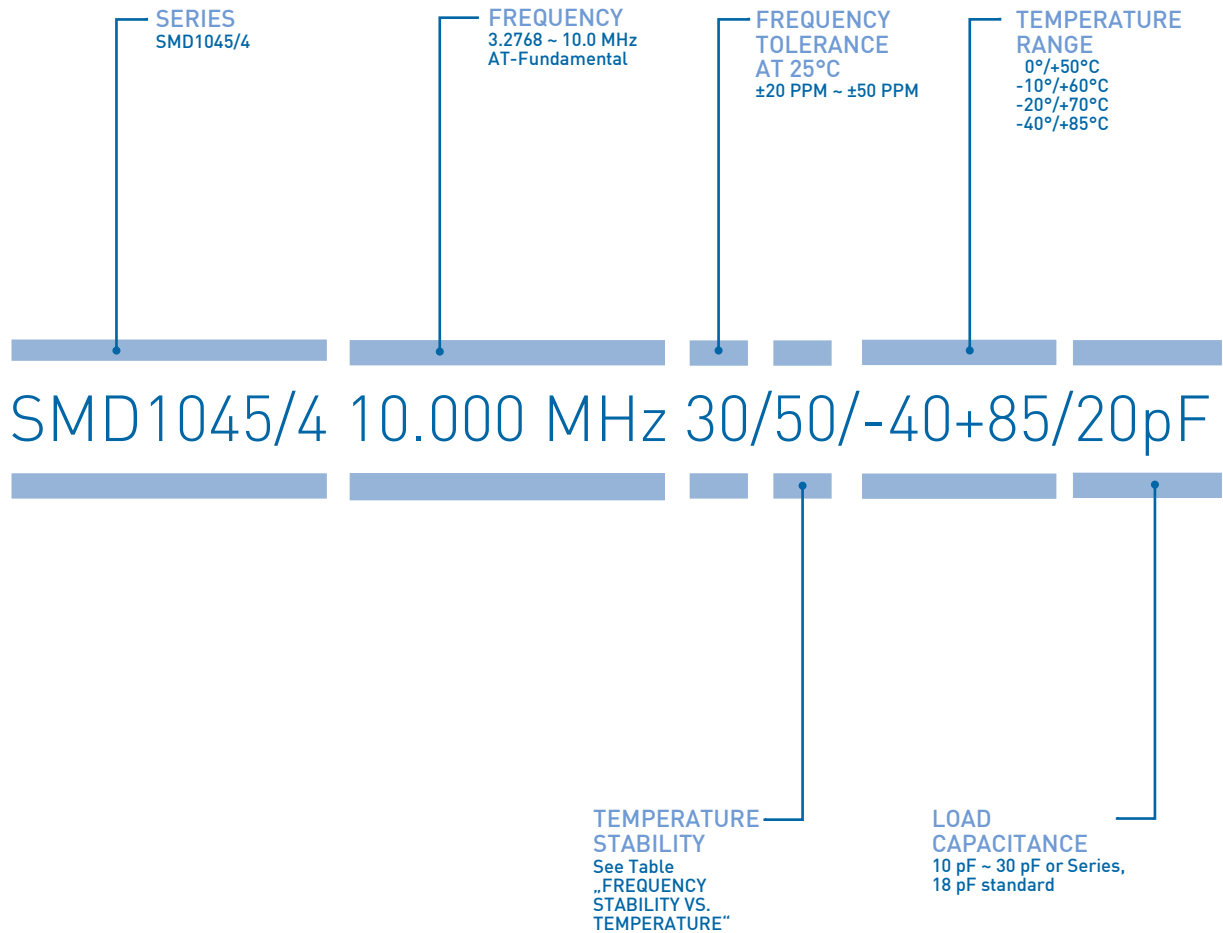


Profile Feature	Pb-Free Assembly
Average ramp-up rate (TL to TP)	3°C/second max.
Preheat:	
Temperature Min (T <sub>smin</sub> )	150°C
Temperature Max (T <sub>smax</sub> )	200°C
Time (min to max) (t <sub>s</sub> )	60-180 seconds
Time maintained above:	
Temperature (TL)	217°C
Time (tL)	60-150 seconds
Peak/Classification Temperature (Tp)	260°C
Time within 5°C of actual Peak Temperature (tp)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

## RESONANCE RESISTANCE

FREQUENCY IN MHZ	VIBRATION MODE	ESR MAX. IN Ω
3.2768 ~ 10.0 MHZ	AT Fund.	120

## ORDERING INFORMATION



EXAMPLE: SMD1045/4 10.000 MHz 30/50/-40+85/20pF

PLEASE INDICATE YOUR REQUIRED PARAMETERS



## 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.