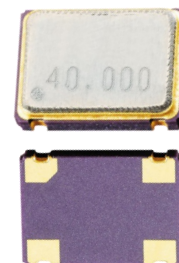


# SMD SPX0 2.5x2.0mm 3.3 VDC MHz

SERIES "SX03-02502"

## FEATURES

- + High reliability for low cost
- + Frequency stability to  $\pm 20$  ppm available
- + Available in 1.8, 2.5, 2.8, 3.0 and 3.3 VDC
- + New standard for small high performance low cost crystal oscillators
- + Low Jitter for excellent performance

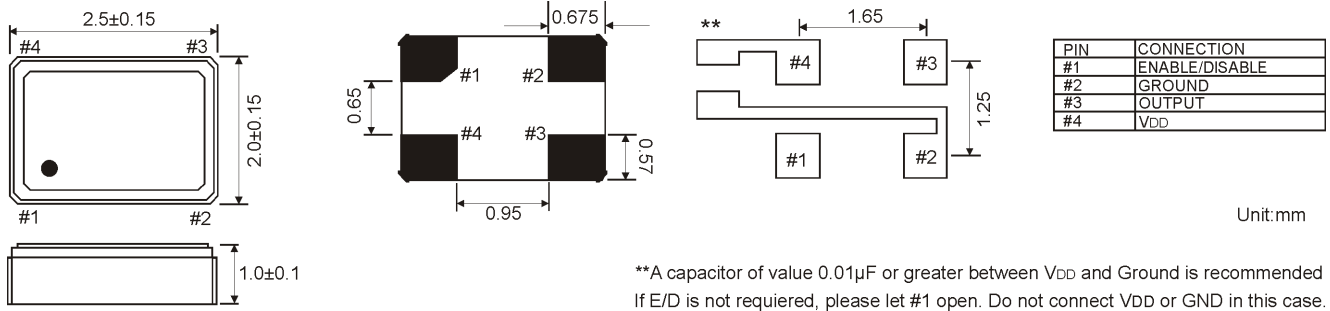


PB FREE / ROHS-2 2011/65/EU COMPLIANT

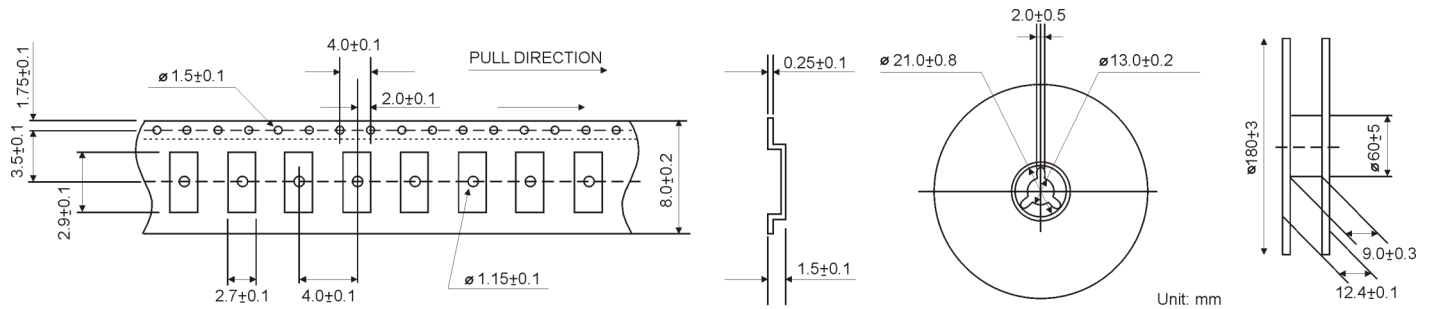
## GENERAL DATA

PARAMETERS		PRODUCT FEATURES AND CONDITIONS	
SMD-OSCILLATOR SERIES		SX03-02502	
PACKAGE		Ceramic package 2.5 x 2.0 x 1.0 mm <sup>3</sup>	
FREQUENCY		0.2 ~ 167.0 MHz	
FREQUENCY STABILITY		-10/+60°C ~ -20/+70°C	$\pm 20 \sim \pm 100$ ppm
		-40/+85°C	$\pm 25 \sim \pm 100$ ppm
		-40/+105°C	$\pm 50 \sim \pm 100$ ppm
		The frequency stability contains the frequency tolerance at 25°C, the temperature stability, supply voltage change and load change. The aging is $\pm 3$ ppm max. per year.	
OPERATING TEMPERATURE RANGE		-10/+60°C ~ -40/+105°C	
STORAGE TEMPERATURE RANGE		-55/+125°C	
INPUT	VOLTAGE	+3.3 VDC $\pm 10\%$	
	CURRENT	0.2 ~ 4.0 MHz = 10 mA max.	
		4.0 ~ 32.0 MHz = 20 mA max.	
		32.0 ~ 80.0 MHz = 30 mA max.	
80.0 ~ 167.0 MHz = 50 mA max.			
OUPUT	SYMMETRY	STANDARD	40/60%
		OPTION	45/55%
	RISE AND FALL TIME	5 ns typical / 10 ns max.	
	"0" LEVEL	CMOS	10% VDD max.
	"1" LEVEL		90% VDD min.
LOAD	CMOS	15 pF max.	
PIN1		WITH ENABLE/DISABLE FUNCTION	
ENABLE / DISABLE FUNCTION		PIN #1 (E/D CONTROL)	PIN #3 (OUPUT)
		OPEN	ACTIVE
		HIGH "1" (VIH >70%VDC)	ACTIVE
		LOW "0" (VIL <30%VDC)	HIGH IMPEDANCE
		OUTPUT DISABLE TIME	150 $\mu$ s max.
		OUTPUT ENABLE TIME	10 ms max.
DELIVERY FORM		Tape & Reel / 1.000 pcs. per reel, lower QTY possible	
<b>OTHER PARAMETERS ARE AVAILABLE ON REQUEST / CREATE HERE YOUR SPECIFICATION</b>			

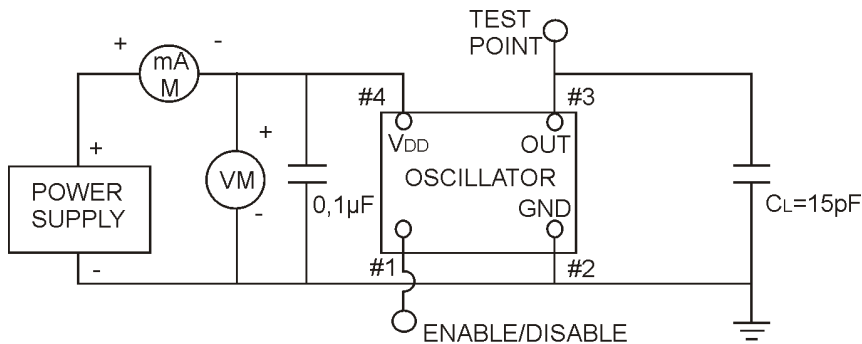
## OUTLINE DRAWING



## REEL SPECIFICATION



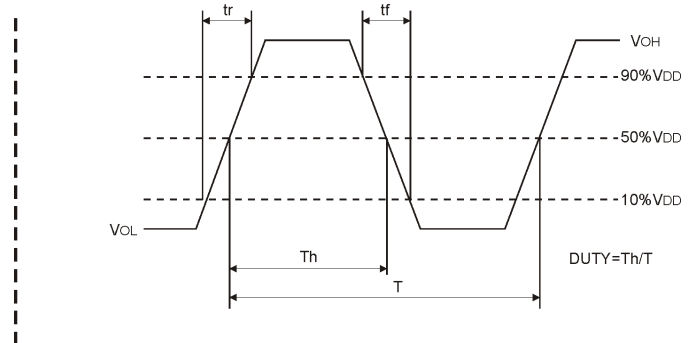
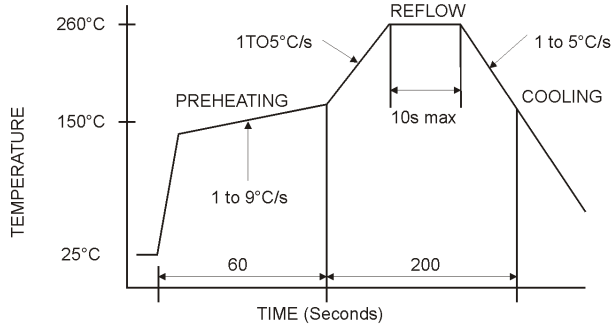
## TEST CIRCUIT CMOS



NOTE: CL includes probe and fixture capacitance

## REFLOW SOLDER PROFILE

## OUTPUT WAVE FORM CMOS



## ORDERING INFORMATION

SERIES  
SX03-02502

SYMMETRY  
B\*=40/60%  
or  
S\*=45/55%

FREQUENCY  
STABILITY  
B\*=100PPM  
or  
O\*=20~50

FREQUENCY  
RANGE  
32.000MHz  
or ON REQUEST  
(0.2 ~ 167.0 MHz)

SX0-02502-S-E-50-W-27.000MHz-T

PIN1  
E=E/D

TEMPERATURE  
RANGE  
B\*=0°/+70°C  
N=-10°/+60°C  
M=-20°/+70°C  
W=-40°/+85°C  
Y=-40°/+105°C

DELIVERY  
FORM

\*B=BLANK, S=SPECIAL, E=ENABLE/DISABLE, O=OPTION, T=TAPE AND REEL

EXAMPLE: SX03-02502-S-E-50-W-27.000MHz-T  
 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.