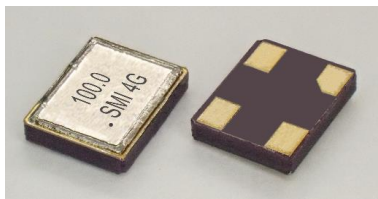


32SMO-B (+1.8V, +2.5V, +3.0V or +3.3V MODELS) 3.2x2.5mm

STANDARD SMD CLOCK OSCILLATORS

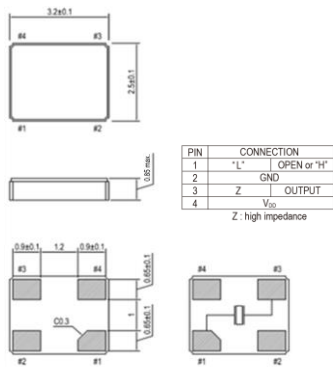
- WIDE OPE. TEMP. RANGE
- WIDE FREQUENCY RANGE
- CMOS OUTPUT
- PACKAGE SIZE 3.2x2.5mm

32SMO-B

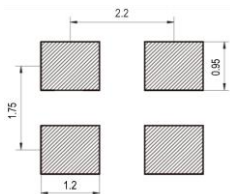


0.025gm(wt.)

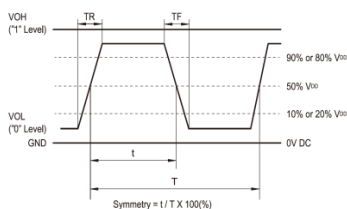
32SMO-B



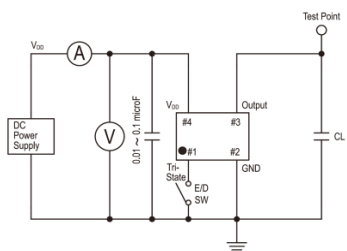
SOLDERING PATTERN



OUTPUT WAVEFORM



TEST CIRCUIT



STANDARD SPECIFICATIONS

Item	Specifications	
General part number	32SMO-B*1	
Frequency range	1.000 MHz to 150.000MHz	
Frequency stability (over all conditions)	Amiii : ± 100 ppm over -40°C to $+200^{\circ}\text{C}$ Bmiii : ± 50 ppm over -40°C to $+200^{\circ}\text{C}$	
Operating Conditions	Operating temperature	-40°C to $+200^{\circ}\text{C}$
	Supply voltage (V_{DD})	1.8V, +2.5V, +3.0V or +3.3V DC $\pm 10\%$
	Stand-by control voltage (Pin#1)	V_{IH} : $70\%V_{DD}$ min. V_{IL} : $30\%V_{DD}$ max.*2
Absolute Max. Ratings	Supply voltage	-0.3V to $+3.96\text{V}$
	Stand-by voltage	-0.3V to $V_{DD}+0.3\text{V}$
	Storage temperature	-40°C to $+200^{\circ}\text{C}$
Current consumption (Pin#1=Open or VIH) No load, $V_{DD}=+3.3\text{V}$	8 mA, Typical (10 mA max.)	
Stand-by current*2	60 μA , Typical (100 μA max.) 45% to 55% at $1/2V_{DD}$ level	
Output -40°C to $+85^{\circ}\text{C}$ (W) -40°C to $+105^{\circ}\text{C}$ (WW)	Symmetry	45% to 55% at $1/2V_{DD}$ level
	Rise and fall times (10% to 90% V_{DD} level)	1.5 ns, Typical (5 ns max.)
	"0" Level "1" level Load	V_{OL} : $10\% V_{DD}$ max. V_{OH} : $90\% V_{DD}$ min. 15 pF max. (CMOS)
Disable delay time	200 ns max	
Enable delay time	10 ms max	
Start-up time	10 ms max	
Total jitter	51 ps, Typical ($V_{DD}=+3.3\text{V}$, BER= 10^{-12})	
Random jitter	3.6 ps, Typical ($V_{DD}=+3.3\text{V}$, BER= 10^{-12})	
RMS jitter (12KHz to 20.000 MHz band)	20 ps, Typical	
Aging	± 5 ppm max. at $+25^{\circ}\text{C}$ $\pm 3^{\circ}\text{C}$ for first year $+250^{\circ}\text{C}$ $\pm 10^{\circ}\text{C}$ for 10 seconds	
Reflow condition	$+170^{\circ}\text{C}$ $\pm 10^{\circ}\text{C}$ for 1 to 2 minutes (preheating)	

(※1) Final part number to be assigned with package type, input voltage, frequency stability and frequency.

e.g. 32SMO-B(2.5VAmiii) 100M

(※2) Internal crystal oscillation to be halted (Pin #1 = V_{IL})

PACKAGE DATA

Item	Package	32SMO-B
Lid		Metal
Base		Ceramic
Sealing		Electron beam
Terminal		Tungsten(metalized)
Terminal plating		Gold/Nickel (surface)/(under)
RoHS		Compliant(Pb-free)

TAPE SPECIFICATIONS

