

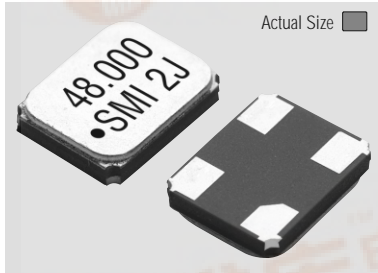
Crystal Clock Oscillators



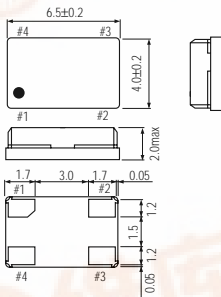
32SMO (+2.5V,+3.0V or +3.3V FIXED MODELS)

STANDARD SMD CLOCK OSCILLATORS

32SMO



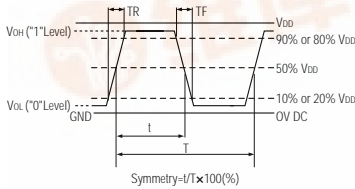
32SMO



PIN	CONNECTION
1	"L" OPEN or "H"
2	GND
3	Z OUTPUT
4	V _{DD}

Z: high impedance

OUTPUT WAVEFORM



STANDARD SPECIFICATIONS

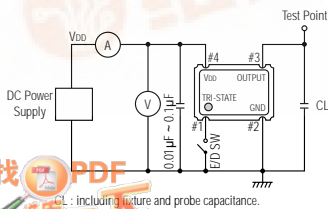
Item	Specifications
Generic part number	32SMO
Frequency range	1.000 MHz to 100.000 MHz
Frequency stability (-10°C to +70°C) over all conditions	32SMO(A) ± 100 ppm 32SMO(B) ± 50 ppm 32SMO(C) ± 30 ppm
Operating Conditions	
Operating temperature	-10°C to +70°C (standard) -40°C to +85°C (W)
Input voltage (VDD)	+2.5V DC ± 0.2V, +3.0V DC ± 0.3V or +3.3V DC ± 0.3V
Stand-by control voltage (Pin#1)	V _{IH} : +2.2V _{DD} min. V _{IL} : +0.8V _{DD} max.
Absolute Max. Rating	
Supply voltage	-0.5V to +7.0V
Storage temperature	-50°C to +125°C
Input current	10 mA max. (Pin #1 = Open or V _{IH})
Stand-by current	50 μA max. (Pin #1 = V _{IL})
Output (-10°C to +70°C)	
Symmetry	40% to 60% at 50%V _{DD} level
Rise and fall times	5 ns max. (10%V _{DD} to 90%V _{DD} level)
"0" level	V _{OL} : 10%V _{DD} max.
"1" level	V _{OH} : 90%V _{DD} min.
Load	15pF max. (CMOS)
Disable delay time	150 ns max.
Enable delay time	10 ms max.
Startup time	10 ms max.
Aging	± 5 ppm max. at +25°C ± 3°C for first year
Jitter	5pS max. Deterministic jitter 7pS max. Random jitter 7pS max. Norm 1-sigma 40pS max. Peak to peak
Reflow soldering condition	+ 240°C ± 5°C for 10 seconds + 150°C ± 10°C for 1 to 2 minutes (preheating)

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

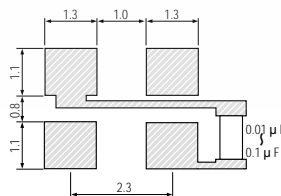
PACKAGE DATA

Item	Package	32SMO
Lid		Metal
Base		Ceramic
Sealing		Seam/EB
Terminal plating		Gold

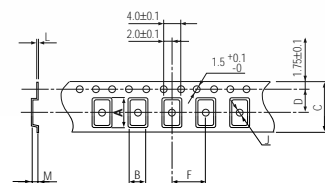
TEST CIRCUIT



SOLDERING PATTERN



TAPE SPECIFICATIONS



A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
3.5	2.8	8.0	3.5	4.0	1.0	0.3	1.4	178	1000pcs

