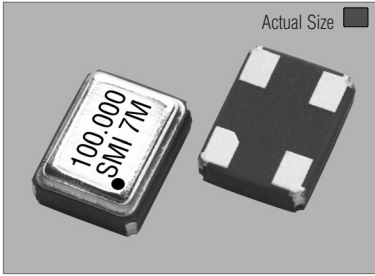


Crystal Clock Oscillators

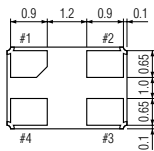
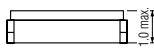
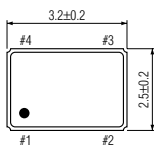
32SMOP (+3.0V or +3.3V PROGRAMMABLE MODELS)

STANDARD SMD CLOCK OSCILLATORS

32SMOP



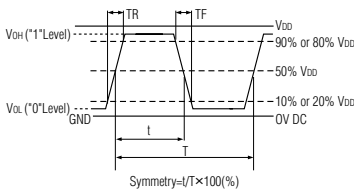
32SMOP



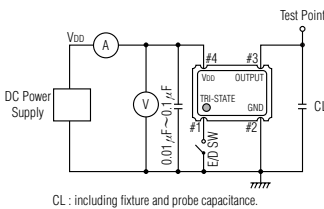
PIN	CONNECTION
1	"L" OPEN or "H"
2	GND
3	Z OUTPUT
4	V _{DD}

Z : high impedance

OUTPUT WAVEFORM



TEST CIRCUIT



STANDARD SPECIFICATIONS

using PLL technology

Item	Specifications
Generic part number	32SMOP※1
Frequency range	1.0000 MHz to 125.0000 MHz
Frequency stability	32SMOP(A) : ±100 ppm over -20°C to +70°C 32SMOP(B) : ±50 ppm over -20°C to +70°C 32SMOP(AW) : ±100 ppm over -40°C to +85°C
over all conditions	
Operating Conditions	
Operating temperature	-20°C to +70°C (standard) -40°C to +85°C (W)
Input voltage (V _{DD})	+3.0V DC ±5% : 1.0 MHz to 66.7 MHz +3.3V DC ±5% : 1.0 MHz to 125.0 MHz
Stand-by※2 control voltage (Pin#1)	V _{IH} : 70%V _{DD} min. V _{IL} : 20%V _{DD} max.※3
Absolute Max. Ratings	
Supply voltage	-0.5V to +7.0V DC
Storage temperature	-55°C to +125°C
Input current(no load)	25 mA max. (Pin #1 = Open or V _{IH})
Stand-by current※2	50 µA max. (Pin #1=V _{IL})
Output (-40°C to +85°C)	
Symmetry	40% to 60% at 50%V _{DD} level
Rise and fall times	4 ns max. (20%V _{DD} to 80%V _{DD} level)
"0" level	V _{OL} : +0.4V max.
"1" level	V _{OH} : V _{DD} -0.4V min.
Load	15 pF max. (CMOS)
Disable delay time	100 ns max.
Enable delay time	10 ms max.
Startup time	10 ms max.
Aging(non operating)	±5 ppm max. at +25°C ±3°C for first year
Jitter	200 pS : Cycle to cycle 250 pS : Peak to peak
Reflow condition	+250°C ±10°C for 10 seconds +170°C ±10°C for 1 to 2 minutes (preheating)

(※1) Final exact part number to be determined with frequency, frequency stability, operating temperature and input voltage.

e.g. 32SMOP(3.3VA) 100.000 MHz.

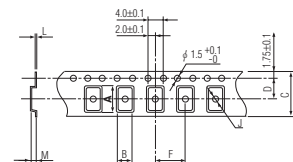
(※2) Output enable/disable function (OE) is available upon request, where internal crystal oscillation to continue (Pin#1=V_{IL}).

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

PACKAGE DATA

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

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

SOLDERING PATTERN

