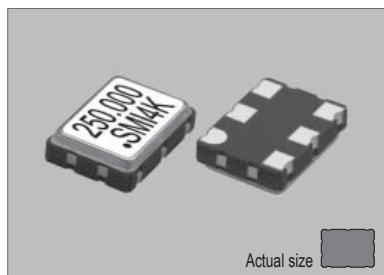
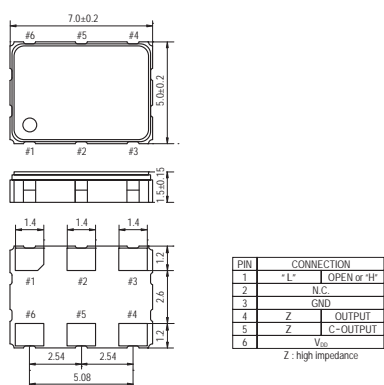


57SMO

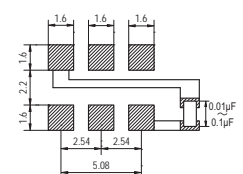


Actual size
0.175 gm (wt.)

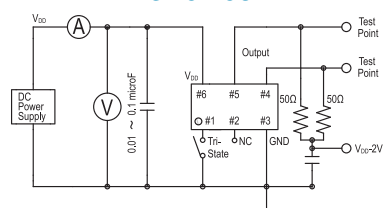
57SMO



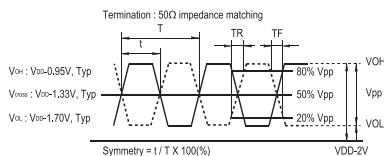
SOLDERING PATTERN



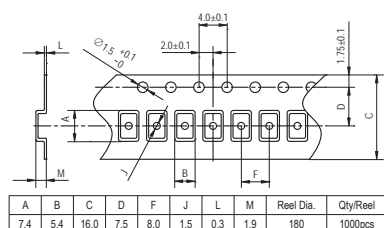
TEST CIRCUIT



OUTPUT WAVEFORM



TAPE SPECIFICATIONS



STANDARD SPECIFICATIONS

● LVPECL OUTPUT
● PACKAGE SIZE 7.0x5.0 mm

Item	Specifications	
General part number	57SMO*1	
Frequency range	13.500 MHz to 400.000 MHz	
Frequency stability (over all conditions)	57SMO(A) : ±100 ppm over -20°C to +70°C 57SMO(B) : ±50 ppm over -20°C to +70°C 57SMO(C) : ±30 ppm over -20°C to +70°C 57SMO(D) : ±25 ppm over -20°C to +70°C 57SMO(E) : ±20 ppm over -20°C to +70°C 57SMO(AW) : ±100 ppm over -40°C to +85°C 57SMO(BW) : ±50 ppm over -40°C to +85°C 57SMO(CW) : ±30 ppm over -40°C to +85°C 57SMO(DW) : ±25 ppm over -40°C to +85°C	
Operating Conditions	Operating temperature	-20°C to +70°C (Standard) -40°C to +85°C (W = Option) -40°C to +105°C (WW = Option)
	Supply voltage (V _{DD})	+2.5V DC ±5% +3.3V DC ±5%
	Stand-by control voltage (Pin#1)	V _{IH} : 70% V _{DD} min. V _{IL} : 30% V _{DD} max.*2
Absolute Max. Ratings	Supply voltage	-0.5V to +5.0V DC
	Storage temperature	-50°C to +125°C
Input current (Pin#1 = Open or V _{IH})	88 mA max. (55mA, Typical)	
Stand-by current*2 (Pin#1 = V _{IL})	30 µA max.	
Output (-40°C to +85°C)	Symmetry (at crossing point)	45% to 55% (13.500 MHz to 350.000 MHz) 40% to 60% (350.000 MHz to 400.000 MHz)
	Rise and fall times (20% to 80% of amplitude)	0.7 ns max. (0.3 ns, Typical)
	"0" Level	V _{OL} : +0.67V to +1.195V V _{OL} : +1.47V to +1.745V
	"1" Level	V _{OH} : +1.415V to +1.760V V _{OH} : +2.215V to +2.42V
Load	50 Ω into V _{DD} -2V	
Start-up time	10 ms max.	
SSB phase noise (at V _{DD} = +3.3V & 155.520 MHz)	-147 dBc / Hz, Typical at 100 kHz offset	
RMS jitter (12 kHz to 20.000 MHz band) (at V _{DD} = +3.3V & 155.520 MHz)	0.5 ps max.	
Disable delay time	200 ns max.	
Enable delay time	2 ms max.	
Differential output voltage	0.4V _{p-p} min.	
Aging	±5 ppm max. at +25°C ±3°C for first year	
Reflow condition	+250°C ±10°C for 10 seconds +170°C ±10°C for 1 to 2 minutes (preheating)	

(*1) Final part number to be assigned with package type, input voltage, frequency stability, operating temperature and frequency.
e.g. 57SMO(3.3VBW) 155.520MHz
(*2) Internal crystal oscillation to be halted (Pin#1 = V_{IL})

PACKAGE DATA

Item	Package	57SMO
Lid		Metal
Base		Ceramic
Sealing		Seam
Terminal		Tungsten (metalized)
Terminal plating		Gold / Nickel (surface) / (under)
RoHS		Compliant (Pb-free)