

XTAL

CLK OSC

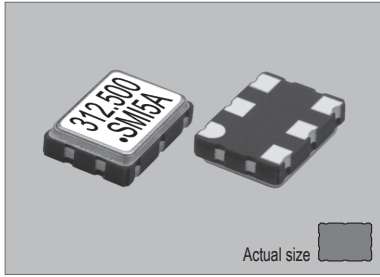
VCXO

TCXO

OCXO

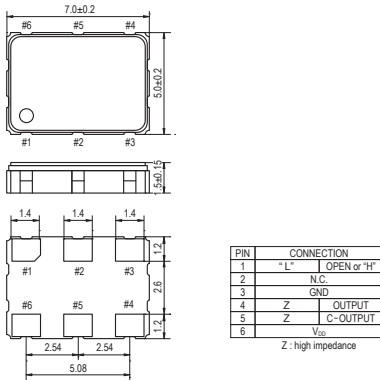
MCF

67SMO

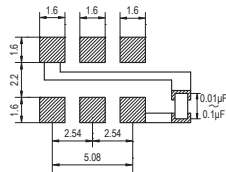


Actual size  
0.175 gm (wt.)

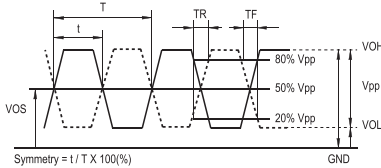
67SMO



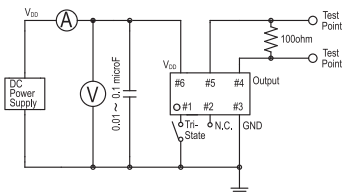
SOLDERING PATTERN



OUTPUT WAVEFORM



TEST CIRCUIT



STANDARD SPECIFICATIONS

● LVDS OUTPUT  
● PACKAGE SIZE 7.0x5.0 mm

Item	Specifications	
General part number	67SMO*1	
Frequency range	13.500 MHz to 350.000 MHz	
Frequency stability (over all conditions)	67SMO(A) : ±100 ppm over -20°C to +70°C 67SMO(B) : ±50 ppm over -20°C to +70°C 67SMO(C) : ±30 ppm over -20°C to +70°C 67SMO(D) : ±25 ppm over -20°C to +70°C 67SMO(E) : ±20 ppm over -20°C to +70°C 67SMO(AW) : ±100 ppm over -40°C to +85°C 67SMO(BW) : ±50 ppm over -40°C to +85°C 67SMO(CW) : ±30 ppm over -40°C to +85°C 67SMO(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)
	Supply voltage (V <sub>DD</sub> )	+2.5V DC ±5%      +3.3V DC ±5%
	Stand-by control voltage (Pin#1)	V <sub>H</sub> : 70% V <sub>DD</sub> min. V <sub>IL</sub> : 30% V <sub>DD</sub> 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 <sub>H</sub> )	70 mA max.	
Stand-by current*2 (Pin#1 = V <sub>IL</sub> )	30 µA max.	
Output (-40°C to +85°C)	Symmetry	45% to 55% at crossing point
	Rise and fall times (20% to 80% of amplitude)	0.7 ns max. (0.3 ns, Typical)
	"0" Level	V <sub>OL</sub> : +1.10V, Typical (+0.9V min.)
	"1" Level	V <sub>OH</sub> : +1.43V, Typical (+1.6V max.)
	Load	100 Ω (OUT-OUTN)
Start-up time	10 ms max.	
SSB phase noise (at V <sub>DD</sub> = +3.3V & 125.000 MHz)	-144 dBc / Hz, Typical at 100 kHz offset	
RMS jitter (12 kHz to 20.000 MHz band) (at V <sub>DD</sub> = +3.3V & 125.000 MHz)	1 ps max.	
Disable delay time	200 ns max.	
Enable delay time	2 ms max.	
Differential output voltage	+0.33Vp-p, Typical (+0.25Vp-p min.)	
Aging	±5 ppm max. at +25°C ±3°C for first year +250°C ±10°C for 10 seconds +170°C ±10°C for 1 to 2 minutes (preheating)	
Reflow condition		

(\*1) Final part number to be assigned with package type, input voltage, frequency stability, operating temperature and frequency. e.g. 67SMO(3.3VC) 164.355MHz

(\*2) Internal crystal oscillation to be halted (Pin#1 = V<sub>IL</sub>)

PACKAGE DATA

Item	Package	67SMO
Lid		Metal
Base		Ceramic
Sealing		Seam
Terminal		Tungsten (metalized)
Terminal plating		Gold / Nickel (surface) / (under)
RoHS		Compliant (Pb-free)

TAPE SPECIFICATIONS

