

XTAL

CLK OSC

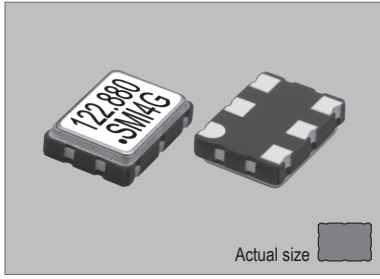
VCXO

TCXO

OCXO

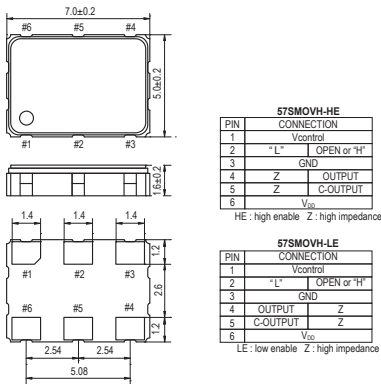
MCF

57SMOVH

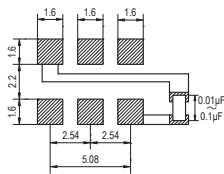


0.175 gm (wt.)

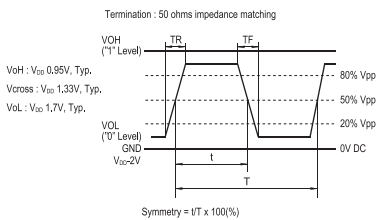
57SMOVH



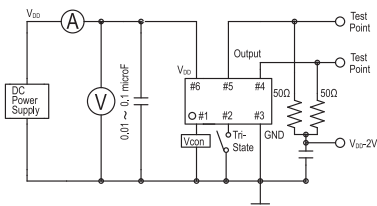
SOLDERING PATTERN



OUTPUT WAVEFORM



TEST CIRCUIT



STANDARD SPECIFICATIONS

- LVPECL VCXO
- WIDE FREQUENCY RANGE
- PACKAGE SIZE 7.0x5.0 mm

Item	Specifications	
General part number	57SMOVH*1	
Frequency range	30.000 MHz to 200.000 MHz	
Frequency stability (over all conditions)	57SMOVH(3.3VB) : ±50 ppm over -20°C to +70°C 57SMOVH(3.3VC) : ±30 ppm over -20°C to +70°C 57SMOVH(3.3VD) : ±25 ppm over -20°C to +70°C 57SMOVH(3.3VE) : ±20 ppm over -20°C to +70°C 57SMOVH(3.3VBW) : ±50 ppm over -40°C to +85°C 57SMOVH(3.3VCW) : ±30 ppm over -40°C to +85°C 57SMOVH(3.3VDW) : ±25 ppm over -40°C to +85°C Vcon = 1/2 V _{DD}	
Frequency pulling range	V _{DD} = +3.3V Vcon = +1.65V ±1.65V ±80 ppm min.	
Frequency change vs. input voltage	±2 ppm max. (V _{DD} ± 10%)	
Operating Conditions	Operating temperature	-20°C to +70°C (Standard) -40°C to +85°C (W = Option)
	Supply voltage (V _{DD})	+3.3V DC ±10%
	Control voltage (Vcon = Pin#1)	+1.65V ±1.65V DC
	Stand-by control voltage (Pin#2)	V _H : 70% V _{DD} min. V _L : 30% V _{DD} max.*2
Absolute Max. Ratings	Supply voltage	-0.3V to +5.0V DC
	Vcontrol voltage	-0.3V to V _{DD} +0.3V DC
	Storage temperature	-40°C to +100°C
Input current (Pin#2 = HE or LE)	90 mA max.	
Stand-by current (Pin#2 = LD or HD)*2	5.0 mA max.	
Output (-40°C to +85°C)	Symmetry	45% to 55% at crossing point
	Rise and fall times (20% to 80% of amplitude)	1.0 ns max.
	"0" Level (0°C to +85°C)	V _{OL} : +1.68V max. (+1.49V min.)
	"1" Level (0°C to +85°C)	V _{OH} : +2.42V max. (+2.275V min.)
	"0" Level (-40°C to + 0°C)	V _{OL} : +1.745V max. (+1.49V min.)
	"1" Level (-40°C to + 0°C)	V _{OH} : +2.42V max. (+2.215V min.)
Load	50 Ω into V _{DD} -2V	
Start-up time	10 ms max.	
Frequency linearity	10 % max.	
Frequency slope	Positive	
Modulation bandwidth (-3 dB)	20 kHz min.	
SSB phase noise (at V _{DD} = +3.3V & 122.880 MHz)	-157 dBc / Hz, Typical at 10 MHz offset	
RMS jitter (12 kHz to 20.000 MHz band)	0.3 ps max.	
Disable delay time	200 ns max.	
Enable delay time	20 μs max.	
Vcon input impedance (Vcon - GND)	10 MΩ min.	
Differential output voltage	+0.4V 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. 57SMOVH-HE(3.3VCW) 156.250 MHz
 (*2) Internal crystal oscillation to be halted.
 LD : Low disable
 HD : High disable

PACKAGE DATA

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

TAPE SPECIFICATIONS

