

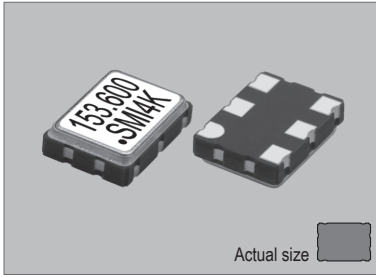
Low Voltage Differential Signaling VCXO

VCXO WIDE FREQ. RANGE 30 to 170 MHz 7.0x5.0 mm LVDS

67SMOVH (+2.5V or +3.3V FIXED LVDS VCXO) 7.0x5.0 mm

STANDARD SMD VCXO

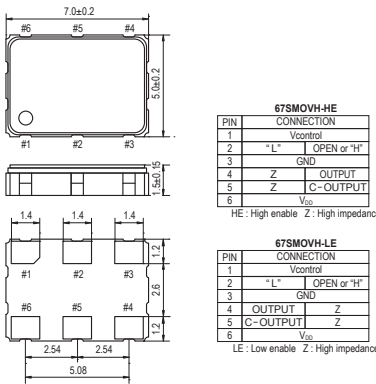
67SMOVH



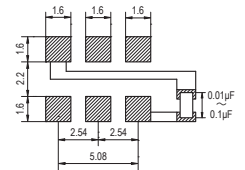
Actual size

0.182 gm (wt.)

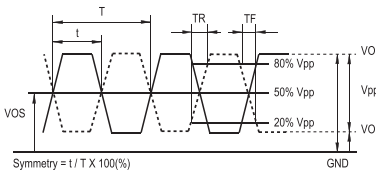
67SMOVH



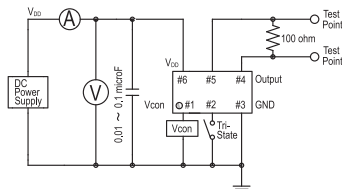
SOLDERING PATTERN



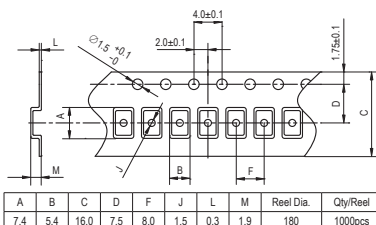
OUTPUT WAVEFORM



TEST CIRCUIT



TAPE SPECIFICATIONS



STANDARD SPECIFICATIONS

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

Item	Specifications	
General part number	67SMOVH*1	
Frequency range	30.000 MHz to 170.000 MHz	
Frequency stability (over all conditions)	67SMOVH(3.3VB) : ±50 ppm over -20°C to +70°C 67SMOVH(3.3VC) : ±30 ppm over -20°C to +70°C 67SMOVH(3.3VD) : ±25 ppm over -20°C to +70°C 67SMOVH(3.3VE) : ±20 ppm over -20°C to +70°C 67SMOVH(3.3VBW) : ±50 ppm over -40°C to +85°C 67SMOVH(3.3VCW) : ±30 ppm over -40°C to +85°C 67SMOVH(3.3VDW) : ±25 ppm over -40°C to +85°C Vcon = 1/2 VDD	
Frequency pulling range	VDD = +3.3V Vcon = +1.65V ± 1.65V ±80 ppm min.	
Frequency change vs. input voltage	±2 ppm max. (VDD ±10%)	
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 (VDD)	+2.5V DC ±10%      +3.3V DC ±10%
	Control voltage (Vcon = Pin#1)	+1.25V ±1.25V DC      +1.65V ±1.65V DC
Absolute Max. Ratings	Stand-by control voltage (Pin#2)	VH : 70% VDD min. VL : 30% VDD max.*2
	Supply voltage	-0.3V to +5.0V DC
Input current (Pin#2 = Open or VH)	Vcontrol voltage	-0.3V to VDD +0.3V DC
	Stand-by current (Pin#2 = "LD or HD")	Storage temperature -40°C to +100°C
Output (-40°C to +85°C)	Supply voltage	40 mA max.
	Symmetry	7 mA max.
	Rise and fall times (20% to 80% of amplitude)	45% to 55% at crossing point
	"0" Level	0.7 ns max.
Start-up time	"1" Level	VOL : +1.1V, Typical (+0.9 V min.)
	Load	VOH : +1.43V, Typical (+1.6 V max.)
Frequency linearity	100 Ω (OUT-OUTN)	
Frequency slope	10 ms max.	
Modulation bandwidth (-3 dB)	10 % max.	
SSB phase noise (at VDD = +3.3V & 122.880 MHz)	Positive	
RMS jitter (12 kHz to 20.000 MHz band)	20 kHz min.	
Disable delay time	-128 dBc / Hz, Typical at 1 kHz offset	
Enable delay time	0.3 ps max. (90 fs, Typical at 122.880 MHz)	
Vcon input impedance (Vcon - GND)	200 ns max.	
Differential output voltage	2 ms max.	
Offset voltage	10 MΩ min.	
Aging	+0.35V, Typical	
Reflow condition	+1.25V, Typical	
	±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)	

(\*1) Final part number to be assigned with package type, input voltage, frequency stability, operating temperature and frequency. e.g. 67SMOVH(3.3VCW) 164.355 MHz  
(\*2) Internal crystal oscillation to be halted.  
LD : Low disable  
HD : High disable

PACKAGE DATA

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

XTAL

CLK OSC

VCXO

TCXO

OCXO

MCF