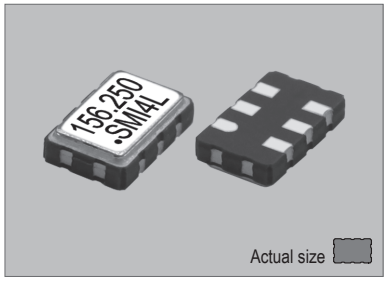
65SMOVH (+2.5V or +3.3V FIXED LVDS VCXO) 5.0x3.2 mm

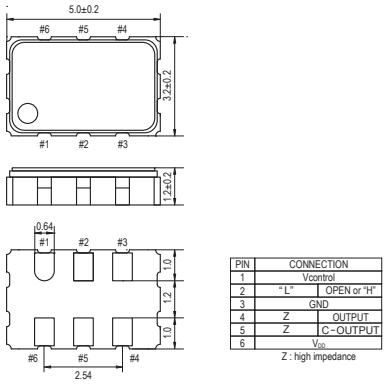
STANDARD SMD VCXO

65SMOVH



0.051 gm (wt.)

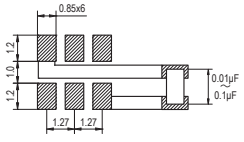
65SMOVH



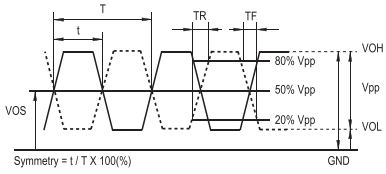
PIN	CONNECTION	
1	Vcontrol	
2	"L"	OPEN or "H"
3	GND	
4	Z	OUTPUT
5	Z	C-OUTPUT
6	V_{DD}	

Z : high impedance

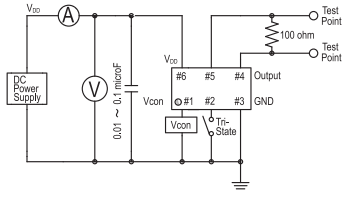
SOLDERING PATTERN



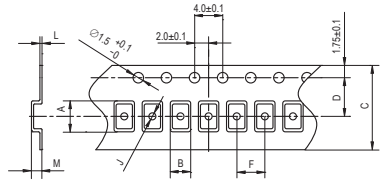
OUTPUT WAVEFORM



TEST CIRCUIT



TAPE SPECIFICATIONS



A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
5.4	3.5	12.0	5.5	8.0	1.5	0.3	1.4	180	1000pcs 2000pcs

STANDARD SPECIFICATIONS

- LVDS VCXO
- WIDE FREQUENCY RANGE
- PACKAGE SIZE 5.0x3.2 mm

Item		Specifications	
General part number		65SMOVH*[1]	
Frequency range		30.000 MHz to 170.000 MHz	
Frequency stability (over all conditions)		65SMOVH(3.3VB) : ±50 ppm over −20°C to +70°C 65SMOVH(3.3VC) : ±30 ppm over −20°C to +70°C 65SMOVH(3.3VD) : ±25 ppm over −20°C to +70°C 65SMOVH(3.3VE) : ±20 ppm over −20°C to +70°C 65SMOVH(3.3VBW) : ±50 ppm over −40°C to +85°C 65SMOVH(3.3VCW) : ±30 ppm over −40°C to +85°C 65SMOVH(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})	+2.5V DC ±10%	+3.3V DC ±10%
	Control voltage (Vcon = Pin#1)	+1.25V ±1.25V DC	+1.65V ±1.65V DC
	Stand-by control voltage (Pin#2)	V_{IH} : 70% V_{DD} min. V_{IL} : 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 = Open or V_{IH})		40 mA max.	
Stand-by current (Pin#2 = "L")		7 mA 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" Level	V_{OL} : +1.1V, Typical (+0.9V min.)	
	"1" Level	V_{OH} : +1.43V, Typical (+1.6V max.)	
	Load	100 Ω (OUT-OUTN)	
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)		−128 dBc / Hz, Typical at 1 kHz offset	
RMS jitter (12 kHz to 20.000 MHz band)		0.3 ps max. (90 fs, Typical at 122.880 MHz)	
Disable delay time		200 ns max.	
Enable delay time		20 ms max.	
Vcon input impedance (Vcon-GND)		10 MΩ min.	
Differential output voltage		+0.35V, Typical	
Offset voltage		+1.25V, Typical	
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. 65SMOVH(3.3VE) 160.000 MHz
(*[2]) Internal crystal oscillation to be halted (Pin#2 = V_{IL}).

PACKAGE DATA

Item \ Package	65SMOVH
Lid	Metal
Base	Ceramic
Sealing	Seam
Terminal	Tungsten (metalized)
Terminal plating	Gold / Nickel (surface) / (under)
RoHS	Compliant (Pb-free)