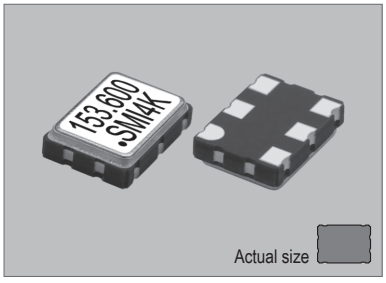
Low Voltage Differential Signaling VCXO

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

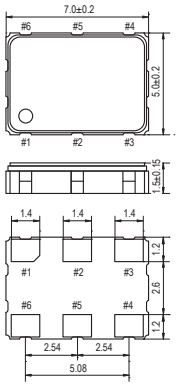
STANDARD SMD VCXO

67SMOVH



0.182 gm (wt.)

67SMOVH



67SMOVH-HE

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

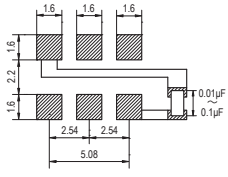
HE : High enable Z : High impedance

67SMOVH-LE

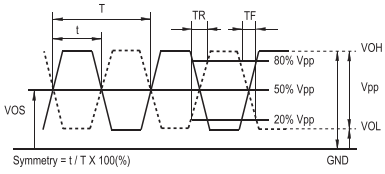
PIN	CONNECTION	
1	Vcontrol	
2	"L"	OPEN or "H"
3	GND	
4	OUTPUT	Z
5	C-OUTPUT	Z
6	V_{DD}	

LE : Low enable Z : High impedance

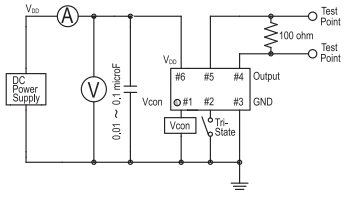
SOLDERING PATTERN



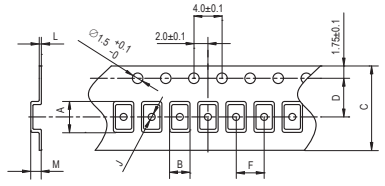
OUTPUT WAVEFORM



TEST CIRCUIT



TAPE SPECIFICATIONS



A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
7.4	5.4	16.0	7.5	8.0	1.5	0.3	1.9	180	1000pcs

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 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) -40°C to +105°C (WW = 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 = "LD or HD")		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 (+0.9 V min.)	
	"1" Level	V_{OH} : +1.43V, Typical (+1.6 V 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		2 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. 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)