

53SMOVH (+3.3V FIXED LVPECL VCXO) 3.2x2.5 mm

STANDARD SMD VCXO

XTAL

CLK OSC

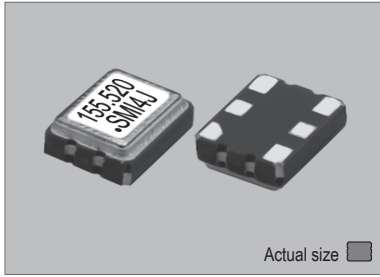
VCXO

TCXO

OCXO

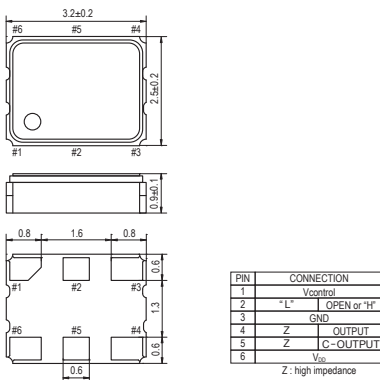
MCF

53SMOVH

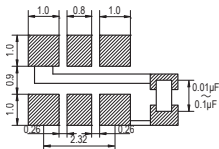


Actual size 0.025 gm (wt.)

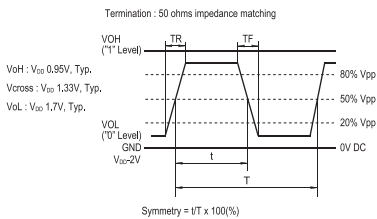
53SMOVH



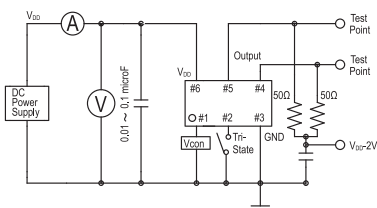
SOLDERING PATTERN



OUTPUT WAVEFORM



TEST CIRCUIT



STANDARD SPECIFICATIONS

- LVPECL VCXO
- WIDE FREQUENCY RANGE
- PACKAGE SIZE 3.2x2.5 mm

Item	Specifications	
General part number	53SMOVH* ¹	
Frequency range	10.000 MHz to 170.000 MHz	
Frequency stability (over all conditions)	53SMOVH(3.3VB) : ±50 ppm over -20°C to +70°C 53SMOVH(3.3VC) : ±30 ppm over -20°C to +70°C 53SMOVH(3.3VD) : ±25 ppm over -20°C to +70°C 53SMOVH(3.3VE) : ±20 ppm over -20°C to +70°C 53SMOVH(3.3VBW) : ±50 ppm over -40°C to +85°C 53SMOVH(3.3VCW) : ±30 ppm over -40°C to +85°C 53SMOVH(3.3VDW) : ±25 ppm over -40°C to +85°C V _{con} = 1/2 V _{DD}	
Frequency pulling range	V _{DD} = +3.3V V _{con} = +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 (V _{con} = 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	-0.5V to +5.0V DC
	V _{control} voltage	-0.5V to V _{DD} +0.5V DC
	Storage temperature	-40°C to +100°C
Input current (Pin#2 = Open or V _H)	80 mA max.	
Stand-by current (Pin#2 = "L")	60 µA max.	
Output (-40°C to +85°C)	Symmetry	45% to 55% at crossing point
	Rise and fall times (20% to 80% of amplitude)	0.5 ns max.
	"0" Level	V _{OL} : +1.68V max. (+1.49V min.)
	"1" Level	V _{OH} : +2.42V max. (+2.275V 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)	15 kHz min.	
SSB phase noise (at V _{DD} = +3.3V & 155.520 MHz)	-117 dBc / Hz, Typical at 1 kHz offset	
RMS jitter (12 kHz to 20.000 MHz band)	1 ps max. (155.520 MHz)	
Disable delay time	200 ns max.	
Enable delay time	2 ms max.	
V _{con} input impedance (V _{con} - GND)	5 MΩ min.	
Differential output voltage	+0.6V min.	
Aging	±5 ppm max. at +25°C ±3°C for first year +25°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. 53SMOVH(3.3VBW) 155.520 MHz

(*²) Internal crystal oscillation to be halted (Pin#2 = V_L).

PACKAGE DATA

Item	Package	53SMOVH
Lid		Metal
Base		Ceramic
Sealing		Seam
Terminal		Tungsten (metalized)
Terminal plating		Gold / Nickel (surface) / (under)
RoHS		Compliant (Pb-free)

TAPE SPECIFICATIONS

