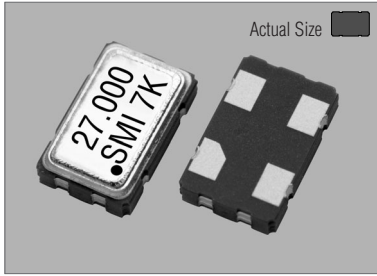
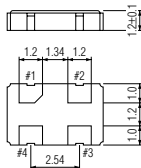
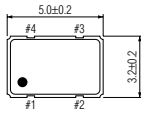


### 99SMOV

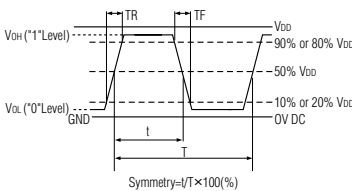


### 99SMOV

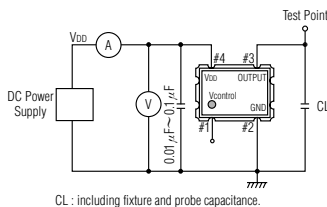


PIN	CONNECTION
1	V <sub>control</sub>
2	GND
3	OUTPUT
4	V <sub>DD</sub>

### OUTPUT WAVEFORM

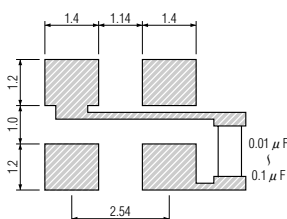


### TEST CIRCUIT



CL : including fixture and probe capacitance.

### SOLDERING PATTERN



### STANDARD SPECIFICATIONS

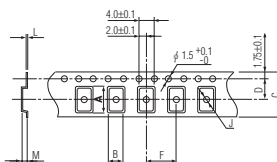
Item	Specifications	
	99SMOV (3.3V)	99SMOV (5V)
Generic part number	99SMOV (3.3V)	99SMOV (5V)
Frequency range	2.000 MHz to 54.000 MHz	
Frequency stability (-20°C to +70°C) over all conditions	99SMOV(3.3VA) : ±50 ppm 99SMOV(3.3VB) : ±30 ppm Vcon = +1.65V	99SMOV(5VA) : ±50 ppm 99SMOV(5VB) : ±30 ppm Vcon = +2.5V
Frequency pulling range	±100ppm* min. (Vcon = +1.65V ±1.35V)	±100 ppm min. (Vcon = +2.5V ±2.0V)
Frequency change vs. input voltage	±5.0ppm max. (VDD = +3.3V DC ±5%)	±5.0ppm max. (VDD = +5V DC ±5%)
Operating Conditions		
Operating temperature	-20°C to +70°C	
Input voltage (VDD)	+3.3V DC ±5%	+5V DC ±5%
Control voltage (Vcon = Pin#1)	+1.65V DC ±1.35V	+2.5V DC ±2.0V
Absolute Max. Ratings		
Supply voltage	-0.3V to +5.5V DC	-0.3V to +7.0V DC
Storage temperature	-40°C to +85°C	
Input current	10 mA max. (2 MHz to 20 MHz) 15 mA max. (20 MHz to 30 MHz) 20 mA max. (30 MHz to 40 MHz) 25 mA max. (40 MHz to 54 MHz)	15 mA max. (2 MHz to 20 MHz) 20 mA max. (20 MHz to 30 MHz) 25 mA max. (30 MHz to 40 MHz) 30 mA max. (40 MHz to 54 MHz)
Output (-20°C to +70°C)		
Symmetry	45% to 55% at 50%VDD level	
Rise and fall times (10%VDD to 90%VDD level)	10 ns max.	
"0" level	VOL : 10% VDD max.	
"1" level	VOH : 90% VDD min.	
Load	15 pF max. (CMOS)	
Startup time	10 ms max.	
Frequency linearity	10% max.	
Frequency slope	Positive	
SSB phase noise	-130 dBc/Hz, Typical at 1 kHz offset	
Aging	±5.0ppm 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)	
Standard frequency	27.000 MHz	

(※) Frequency pulling range is ±80 ppm min. (Vcon = +1.65V ±1.35V) for 30 MHz and over.

### PACKAGE DATA

Item	Package	99SMOV
Lid		Metal
Base		Ceramic
Sealing		Seam
Terminal		Tungsten (metalized)
Terminal plating		Gold / Nickel (surface) / (under)
RoHS		Compliant (Pb-free)

### 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	178	1000pcs