

CERAMIC SMD TYPE SVH

- Ceramic SMD package
- Voltage Controlled Crystal Oscillator
- 5.0 / 3.3 / 2.5 supply voltage
- HCMOS/TTL output
- Stability to ± 20 ppm
- Tri-state function available
- Reflow soldering is possible
- Available on tape and reel
- Fund or Multi available



ELECTRICAL SPECIFICATIONS

Frequency Range	1.000 to 80.000MHz(Fund)	80.001 to 300.000MHz(Multi)
Operating Temperature Range	0 to +70 °C or -40 to +85 °C	
Storage Temperature Range	-55 to +125 °C	
Frequency Stability	Inclusive of Operating Temperature Range, Supply Voltage and Load	± 50 , ± 25 , ± 20 ppm
Supply Voltage(V _{DD})	5.0V _{DC} $\pm 5\%$, 3.3V _{DC} $\pm 5\%$, 2.5V _{DC} $\pm 5\%$	3.3V _{DC} $\pm 5\%$
Input Current	1.000 to 20.000MHz 10mA max. 20.001 to 40.000MHz 20mA(5V), 15mA(3.3V / 2.5V)max. 40.001 to 80.000MHz 30mA(5V), 25mA(3.3V / 2.5V)max.	80.001 to 300.000MHz, 50mA max.
Frequency Deviation / Pin 1 Control Voltage	2.5 \pm 2.0V _{DC} (or 2.5V) 1.65 \pm 1.35V(or 1.65V) 1.25 \pm 1.05V(or 1.25V)	± 80 , ± 100 (STD), ± 150 ppm(optional) min.
Linearity		± 20 , ± 15 , $\pm 10\%$
Output Voltage Logic High(V _{OH})	HCMOS Load	90% of V _{DD} min.
Output Voltage Logic Low(V _{OL})	HCMOS Load	10% of V _{DD} max.
Rise / Fall Time	1.000 to 20.000MHz 10ns max. 20.001 to 40.000MHz 8ns max. 40.001 to 80.000MHz 5ns max.	80.001 to 300.000MHz, 10ns max.
Duty Cycle	50% of Waveform w/HCMOS Load	50 \pm 10% (STD) 50 \pm 5% (Optional)
Load Drive Capability		15pF HCMOS Load(STD)
Pin 2 Tri-state Input Voltage	V _{IH} : $\geq 0.7V_{DD}$ V _{IL} : $\leq 0.3V_{DD}$	Enable Output
Pin 5 Tri-state Input Voltage	No Connection	Enable Output Disable Output : High Impedance
Aging (at 25 °C)		± 3 ppm, ± 5 ppm/year max.
Start-up Time		10ms max.
Period Jitter : pk-pk		100ps max.
Period Jitter : One Sigma		25ps max.

Part Numbering Guide

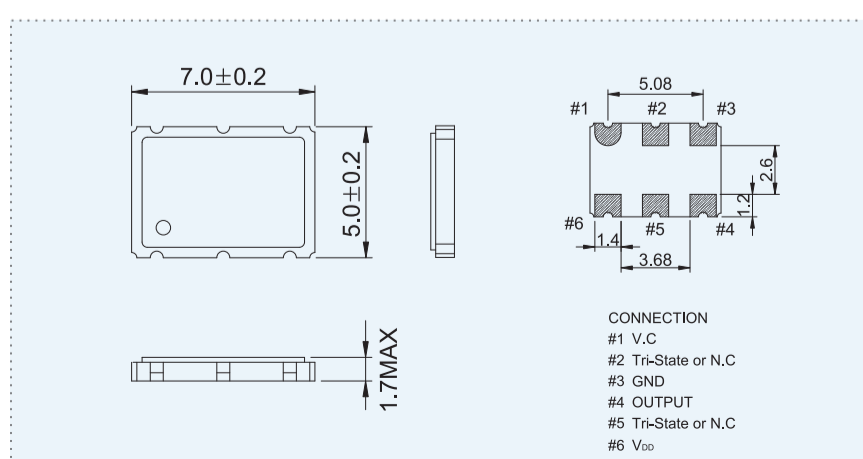
MODEL (PKG TYPE)	SUPPLY VOLTAGE	FREQUENCY STABILITY	OPER-TEMP RANGE	DUTY CYCLE	DEVITION	PACKING	FREQUENCY (MHZ)
SVH	BLANK : 5.0V 3 : 3.3V	TABLE1 REFERENCE	TABLE1 REFERENCE	D : 45 : 55 BLANK : 40 : 60	A : ± 10 ppm min. B : ± 30 ppm min. C : ± 50 ppm min. D : ± 100 ppm min. E : ± 150 ppm min. F : ± 200 ppm min. G : ± 300 ppm min. SPH : ONLY A ~ E SP,SL : ONLY C, D	BLANK : BULK R : TAPE & REEL	xx.xxx(STD) xx.xxxxxx

Table1.

		FREQUENCY STABILITY vs. TEMPERATURE RANGE						
Temp	Stability	± 10 ppm	± 15 ppm	± 20 ppm	± 25 ppm	± 30 ppm	± 50 ppm	± 100 ppm
		10	15	20	25	30	50	100
0 ~ 50 °C	A	*	*	*	*	*	*	*
0 ~ 60 °C	B	*	*	*	*	*	*	*
-10 ~ 60 °C	C	*	*	*	*	*	*	*
0 ~ 70 °C	D		*	*	*	*	*	*
-10 ~ 70 °C	E		*	*	*	*	*	*
-20 ~ 70 °C	F		*	*	*	*	*	*
-40 ~ 85 °C	G				*	*	*	*

MECHANICAL DIMENSIONS

(mm)



LAND PATTERN

(mm)

