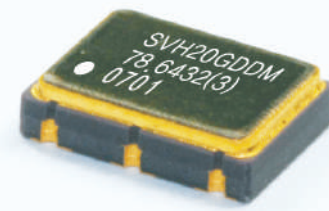


CERAMIC SMD TYPE SVH

- 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

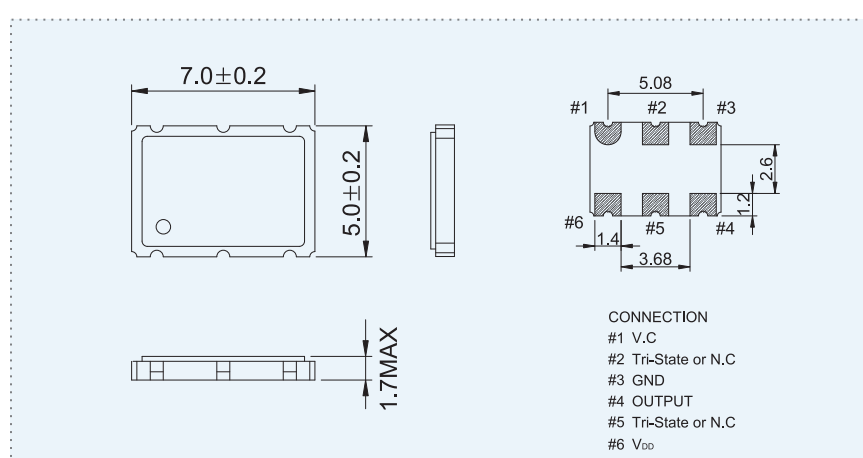
| MODEL (PKG TYPE) | SUPPLY VOLTAGE | FREQUENCY STABILITY | OPER-TEMP RANGE | DUTY CYCLE | DEVITON | PACKING | FREQUENCY (MHZ) |
|------------------|--------------------------|---------------------|------------------|--------------------------------|--|---------------------------------|--------------------------|
| 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)

