

SMD TYPE SVE

- Voltage Controlled Crystal Oscillator
- HCMOS/TTL output
- 3.3 / 5.0 supply voltage
- Wide frequency and pull range
- Surface mount package
- Available on tape and reel



ELECTRICAL SPECIFICATIONS

Frequency Range	1.000 to 60.000MHz		
Operating Temperature Range	0 to +70 °C or -40 to +85 °C		
Storage Temperature Range	-40 to +85 °C		
Supply Voltage(V _{DD})	5.0V _{DC} ±5%		3.3V _{DC} ±5%
Aging (at 25 °C)	±3ppm/year max.		
Load Drive Capability	10 TTL Load or 15pF HCMOS Load		
Start-up Time	10ms max.		
Frequency Deviation / Pin 1 Control Voltage	2.5V _{DC} ±2.0V _{DC}	±10, ±30, ±50, ±100ppm min.	
	2.5V _{DC} ±2.5V _{DC}	±10, ±30, ±50, ±100, ±150ppm min.	
	1.65V _{DC} ±1.65V _{DC} (or ±1.5V _{DC})	±10, ±30, ±50, ±100, ±150ppm min.	
Linearity	±20, ±15, ±10, ±5%(Optional)		
Input Current	1.000 to 20.000MHz	20mA max.	15mA max.
	20.001 to 40.000MHz	30mA max.	25mA max.
	40.001 to 60.000MHz	40mA max.	35mA max.
Frequency Stability	±50, ±25, ±20, ±10ppm		
Output Voltage Logic High(V _{OH})	w/TTL Load	2.4V _{DC} min.	
	w/HCMOS Load	90% of V _{DD} min.	
Output Voltage Logic Low(V _{OL})	w/TTL Load	0.4V _{DC} max.	
	w/HCMOS Load	10% of V _{DD} max.	
Duty Cycle	at 50% of Waveform w/HCMOS Load or	50 ±10% (STD)	
	1.4V _{DC} w/TTL Load	50 ±5% (Optional)	
Rise / Fall Time	5ns max.		
Period Jitter : pk-pk	100ps max.		
Period Jitter : One Sigma	25ps max.		

Part Numbering Guide

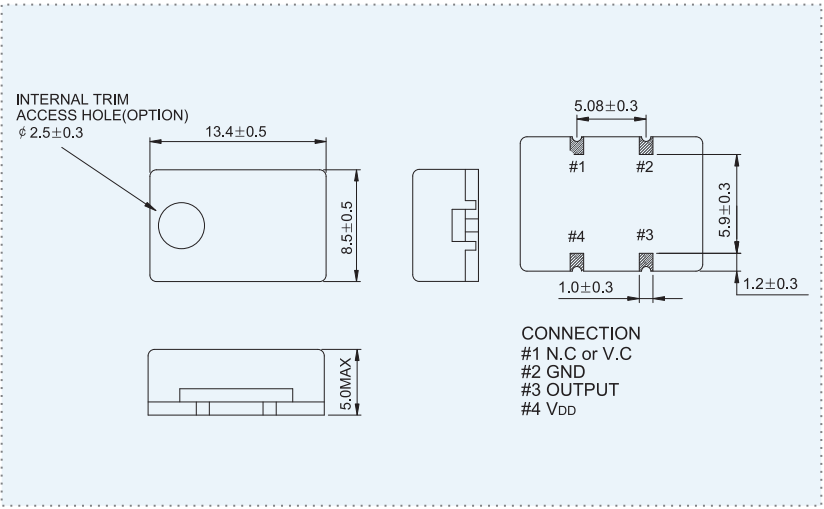
MODEL (PKG TYPE)	SUPPLY VOLTAGE	FREQUENCY STABILITY	OPER-TEMP RANGE	DUTY CYCLE	DEVITION	PACKING	FREQUENCY (MHZ)
SVE	BLANK : 5.0V 3 : 3.3V	TABLE1 REFERENCE	TABLE1 REFERENCE	D : 45 : 55 BLANK : 40 : 60	A : ± 10ppm min. B : ± 30ppm min. C : ± 50ppm min. D : ± 100ppm min. E : ± 150ppm min. F : ± 200ppm min. G : ± 300ppm 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		± 10ppm	± 15ppm	± 20ppm	± 25ppm	± 30ppm	± 50ppm	± 100ppm
		10	15	20	25	30	50	100
0 ~ 50℃	A	*	*	*	*	*	*	*
0 ~ 60℃	B	*	*	*	*	*	*	*
-10 ~ 60℃	C	*	*	*	*	*	*	*
0 ~ 70℃	D		*	*	*	*	*	*
-10 ~ 70℃	E		*	*	*	*	*	*
-20 ~ 70℃	F		*	*	*	*	*	*
-40 ~ 85℃	G				*	*	*	*

MECHANICAL DIMENSIONS

(mm)



LAND PATTERN

(mm)

