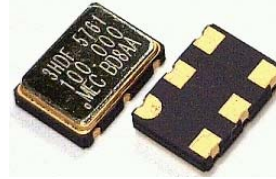


SMD HCSL output
7.0 x 5.0 x 1.8 mm



Features

- Ultra Small SMD seam sealed clock crystal oscillator units.
- Tri-state function available on pad No. 1.

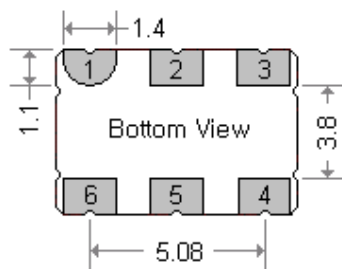
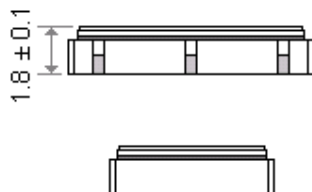
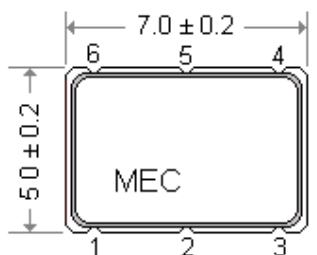
Applications

- HCK femto second integrated phase jitter (200 fs typical , 12 KHz to 20 MHz) .
- HCK superior phase noise (-138 dBc/Hz at 10 KHz and -144 dBc/Hz at 100 KHz offset) .
- 2.5 V or 3.3 V supply voltage .

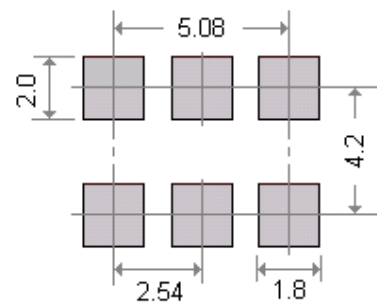
General Specifications

Parameters		Electrical Spec.							
Input Voltage (V _{DD})		2.5 V ± 5 %							
Frequency Range / Load		13.5 MHz ~ 200,0 MHz							
Output Wave Form		HCSL output							
Output Logic High " 1 "	min.	550 mV							
	typical	690 mV							
	max.	800 mV							
Output Logic Low " 0 "	min.	-160 mV							
	typical	0 mV							
	max.	150 mV							
Integrated Phase Noise (12 KHz to 20 MHz)		0.2 ps (typical) ; 0.5 ps (max.)							
Rise Time (Tr) / Fall Time (Tf)		0.3n sec.(typical) ; 0.7 n sec. (max.)							
Output Voltage Swing		600 mV min. (V _{DD} = +2.5V)							
Duty Cycle		50% ± 10% [50% ± 5% is also available]							
Load		50 Ω into Vcc - 2V or Thevenin equivalent							
Current Consumption (15 pF load)		30 mA (typical) , 50 mA (max.)							
Start - Up Time (Ts)		10 m sec.(typical)							
Storage Temperature		- 50°C to 100°C							
Aging		± 3 ppm per year (max.)							
Frequency Stability ⁽¹⁾ Codes	Frequency Stability over Operating Temperature Range	± 25 ppm	± 50 ppm	± 100 ppm	If non-standard , please enter the desired stability after the " C " or " I "				
	Commercial (-10°C to +70°C)	A	B	C	For example :				
	Industrial (-40°C to +85°C)	D	E	F	" C20 " ±20 ppm over -10°C to +70°C ; " I20 " ± 20 ppm over -40°C to +85°C				
Phase Noise (typical) [156.250 MHz]		Offset	10 Hz	100 Hz	1K Hz	10 KHz	100KHz	1 MHz	10 MHz
		dBc / Hz	-75	-90	-120	-135	-142	-147	-155

Outline Dimensions (Unit : mm)



Pad Connections :
 Pad 1 : Tri - state
 Pad 2 : No connection
 Pad 3 : Ground
 Pad 4 : HCSL output
 Pad 5 : Complimentary output
 Pad 6 : Supply voltage



Suggested Land Pattern