

SMD HCSL Crystals



Oscillators-Differential Output 7.0x5.0x1.6mm HA Series



Features

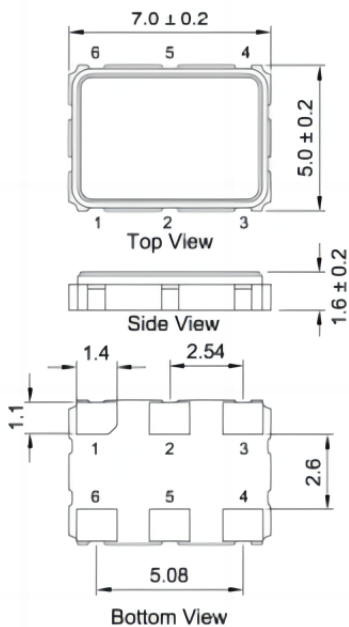
- > 3rd overtone solution.
- > 3.3V and 2.5V operation available.
- > HCSL output, output frequencies 100 MHz to 175 MHz.
- > Excellent low phase noise and jitter.
- > Tri-State function available.
- > PCI-Express, SAS, SATA and other high-Speed interface applications.
- > RoHS Compliant / Pb Free.

Quartz
Oscillators

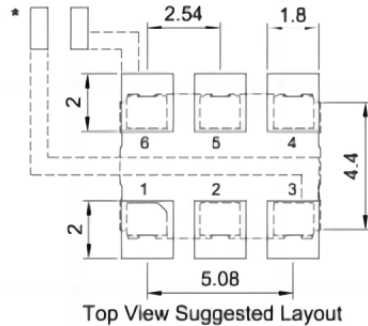
Electrical Specifications

Item / Type	HA
Output Type	HCSL
Output Load	50Ω
Oscillation Mode	3rd Overtone
Supply Voltage	2.5V, 3.3V
Frequency Range	100 ~ 175 MHz
Overall Frequency Stability	± 30 ppm, ± 50 ppm or specify
Operating Temperature Range	- 40 ~ + 85 °C, - 40 ~ + 105 or specify
Storage Temperature Range	- 55 ~ + 125 °C
Voltage Vol(Typ.) / Voh(Typ.)	0 mV / 740 mV
Rise (Tr) / Fall (Tf) Time (20%~80%)	0.5nS Max
Supply Current	30 mA Max.
Symmetry	45 ~ 55%
Start-up Time	10 mS Max.
Phase Jitter (12 KHz ~ 20 MHz)	0.2pS Typ., 1.0ps Max

Dimensions



* :External high frequency power supply decoupling required.



Units: mm