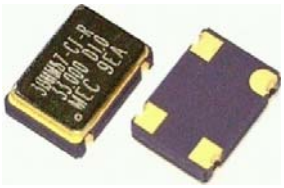
Spread Spectrum Low EMI Clock Oscillator *HM57 series* Down Spread - 0.75 %

SMD CMOS output 7.0 x 5.0 x 1.8 mm

P group



RoHS Compliance

Features

- Ultra Small SMD seam sealed spread spectrum Low EMI clock crystal oscillator units.
- Tri-state function available.

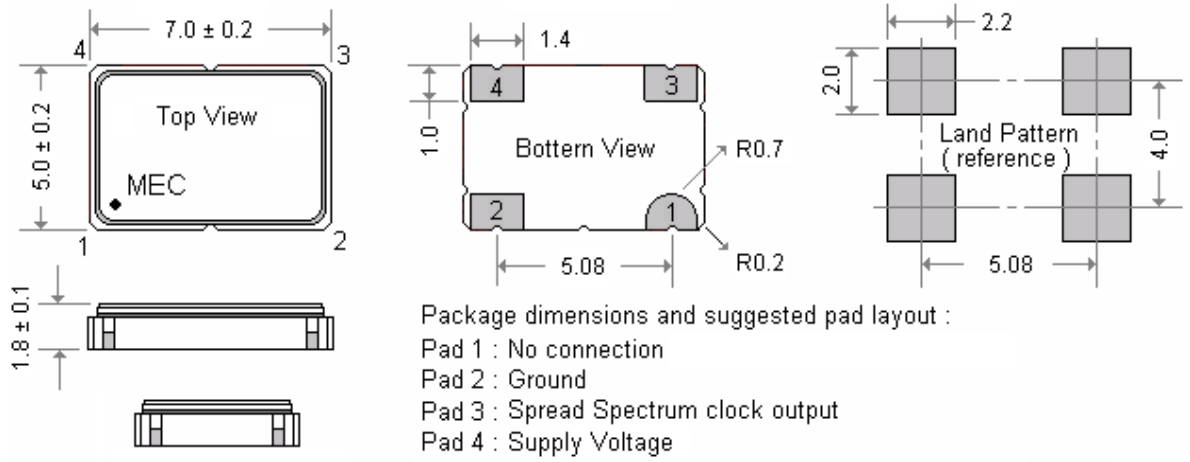
Applications

- Printers ; Multiple function printers (MPCs)
- Digital copiers; PDAs
- Networking; LAN / WAN; Routers
- Storage systems (CD-ROM, VCD, DVD and HDD)
- Scanner; Modems; projectors
- Embedded systems; Electrical musical instrument
- Automotive; GPS car navigation systems
- LCD PC monitors / LCD TVs
- ADSL; PCMCIA
- Still Digital cameras (SDCs)

General Specifications

Paramenters		Electrical Spec.			
Input Voltage (V_{DD})		3.3 V D.C. ± 5 %			
Frequency Range		13.0 ~ 220.0 MHz			
Output Wave Form		CMOS output			
Characteristic Group		Mercury Group " P "			
Spread Type / Total Spread Percentage		Down Spread / - 0.75 %			
EMI Reduction (applys to the whole spectrum)		EMI reduction(dB)=10Log			
Output Logic High " 1 "		2.4V (min.) ; [at 80% V_{DD}]			
Output Logic Low " 0 "		0.4V (max.) ; [at 20% V_{DD}]			
Output Load		15 pF			
Rise Time (Tr) / Fall Time (Tf)		1.3n sec. (max.) [20% V_{DD} ↔ 80% V_{DD}]			
Modulation Carrier Frequency (Dither rate)		25.3 KHz (min.) ; 58.6 KHz (max.) [Freq. dependent .]			
Duty Cycle		50% ± 5% [CL=15pF;at 50%VDD]			
Current Consumption		25mA (typ.) ; Frequency dependent			
Pin 1 Option		No Tri-State option available			
Cycle - to - cycle Jitter		± 100 ps (typ.)			
Start - Up Time (Ts)		2.0 m sec.(typical) ; 5.0 m sec.(max.)			
Storage Temperature		- 65°C to 150°C			
Aging		± 5 ppm per year (max.) ; T = 25 ℃			
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 " For example : " C20 " ±20 ppm over -10°C to +70°C ; " I20 " ± 20 ppm over -40°C to +85°C
	Commercial (*-10°C to +70°C*)	*A*	*B*	*C*	
	Industrial (*-40°C to +85°C*)	*D*	*E*	*F*	

Outline Dimensions (Unit : mm)



Package dimensions and suggested pad layout :

Pad 1 : No connection

Pad 2 : Ground

Pad 3 : Spread Spectrum clock output

Pad 4 : Supply Voltage

Mercury www .mercury-crystal.com

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