HM International
Frequency Technology

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HCMOS THRU-HOLE VOLTAGE CONTROLLED CRYSTAL CLOCK OSCILLATOR

FEATURES

20.7 x 13.1 x 5.08 mm

- Thru-hole DIL14 package
- Large frequency pulling available
- Many options available
- Applications: Set-top boxes, Audio-video applications, Fibre channel, ...

Item	Specification			
Frequency Range	1.0 MHz ~ 125.0 MHz			
Output Logic	CMOS			
Overall Frequency Stability *	± 20 ppm ~ ± 100 ppm (see options)			
Operating Temperature Range	0 ~ +70°C commercial application (see options)			
	-40 ~ +85°C industrial application (see options)			
Supply Voltage Vdd	+1.8V ±5%	+2.5V ±5%	+3.3V ±5%	+5.0V ±5%
Control Voltage Center	+0.9 V	+1.25V	+1.65V	+2.5V
Control Voltage Range	0.0V to 1.8V	0.25V to 2.25V	0.3V to 3.0V	0.5V to 4.5V
Supply Current Idd	10 ~ 45 mA (Frequency dependent)			
Output Level	VOH ≥ 0.9 Vdd	VOL ≤ 0.1 Vdd		
Output Load	15pF			
Symmetry	45 / 55%			
Rise Time / Fall Time Fr/Ff	10 ns max (1.0 MHz ~9.99 MHz)			
	6 ns (10.0 Mhz ~54 MHz)			
	4 ns (54.1 Mhz ~125 MHz)			
Start-up Time	10 ms max.			
RMS Jitter (12 kHz to 20 MHz band)	1 ps max.			
Phase Noise	-130 dBc/Hz max. at 1 kHz offset			
Frequency Pulling Range	±50 ppm min.; ±100 ppm min.; ±150 ppm min.; ±200 ppm min. (See options)			
Linearity	6% typical; 10% max.			
Slope Polarity	Positive (Increasing control voltage always increases output frequency)			
Modulation Bandwidth	10 kHz min (-3 dB)			
Input Impedance	1 MΩ min.			
Packing Unit	100 pcs / box			
	Customer specifications on request			

(*) Includes initial tolerance @+25°C, stability over operating temperature, stability vs. load change, stability vs. supply change and one year aging

OPTIONS & ORDERING INFORMATION

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.... - .... MHz

Supply Voltage	Operating Temp. *	Overall Stability *	Tri-state Function	Package type	Pulling *	Frequency in MHz
18 = +1.8 V	**D =** -10° / +60°C	**20 =** ±20 ppm	**F =** No Tri-state	**H1 =** 5.08 mm	**50 =** ±50 ppm min.	Please specify the frequency in MHz
25 = +2.5 V	**E =** 0° / +70°C	**25 =** ±25 ppm			**100 =** ±100 ppm min.	
33 = +3.3 V	**F =** -20° / +70°C	**30 =** ±30 ppm			**150 =** ±150 ppm min.	
50 = +5.0V	**G =** -30° / +75°C	**50 =** ±50 ppm			**200 =** ±200 ppm min.	
	H = -30° / +85°C	**100 =** ±100 ppm				
	K = -40° / +85°C					

(*) Note : Not all combinations are possible, please consult us.

OUTLINE DIMENSIONS
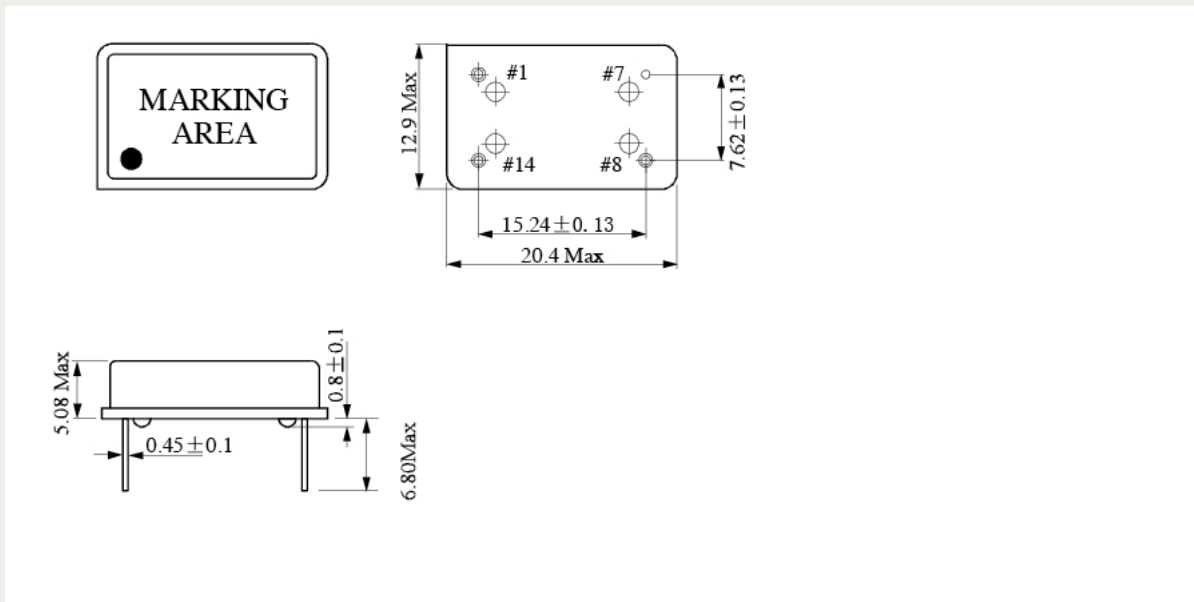
Pin Connections	#1 : Control Voltage	#7 : GND	#8: Output	#14 : Vdd