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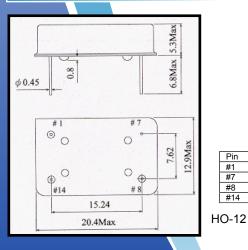
## DESCRIPTION

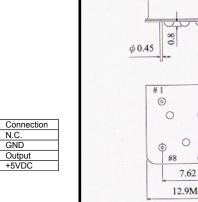
VTM offer a very competitively priced range of full size (HO- 12) and half size (HO- 22) HCMOS / TTL Crystal oscillators. They are housed in a resistance welded case. The frequency range available is 1.000 to 100MHz. Output symmetry is 40 to 60% standard, although 45 to 55% is available. Likewise the standard operating temperature range is 0° C to 70° C, although an extended range of -40° C to +85° C can be manufactured.

## **SPECIFICATIONS**

Model		HO- 12 Series	HO- 22 Series	
Package		14 Pin DIP (Full Size)	8 Pin DIP (Half Size)	
Frequency Range (Fo)		1.000MHz to 100.000 MHZ		
Frequency Stability $(\Delta f / f_o)$		A = $\pm$ 25 ppm, B = $\pm$ 50 ppm, C = $\pm$ 100 ppm		
Operating Temperature Range (T <sub>OPR</sub> )		0°C to +70°C, -40°C to +85°C (available)		
Storage Temperature (T <sub>STG</sub> )		-55°C to +125°C		
Power Supply Voltage (V <sub>DD</sub> )		$5V\pm0.5~V~DC$		
Ageing (at 25°C)		$\pm$ 5 ppm / year Max.		
		1.000 MHz to 2	3.999 MHz 20mA Max.	
Supply Current		(I <sub>DD</sub> )	24.000 MHz to 4	9.999 MHz 30mA Max.
			50.000 MHz to 6	69.999 MHz 40mA Max
		70.000 MHz to 1	00.000 MHz 60mA Max	
Output symmetry (at 50% V <sub>DD</sub> )		40 to 60 % Normal, 45 to 55% Available		
Rise and Fall Time $(T_R, T_F)$			5 ns Max.	
10% to 90% of Waveform W/H <sub>CMOS</sub> Load				
Output Voltage Logic High (V <sub>OH</sub> )		4.5 V Min.		
Output Voltage Logic Low (V <sub>OL</sub> )		0.5 V Max.		
Output	1.000MHz to 39.999 MHz		10 TTL Load or 50 pF HCMOS Load	
Load	40.000 MHz to 100.000 MHZ		10 TTL Load or 15 pF HCMOS Load	

## **DIMENSIONS (mm)**





	5.3Mac
0.8	6.8Max 5.3Ma
#1 #4 © • • •	7.62 12.9Max
**************************************	
12.9Max	

Pin	Connection	
#1	N.C.	
#4	GND	
#5	Output	
#8	+5VDC	

HO-22

## **ORDERING DATA**

Pin

#1

#7

#8

#14

N.C. GND

Output

+5VD0

Specify model, frequency stability (ppm), frequency (in MHz), and temperature range

HO- 12 C – 10.000 – S E.g (blank for 0°C to + 70°C; S for -40°C to +85°C)

series HO-12/HO-22

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