

5Vdc • HCMOS/ TTL COMPATIBLE FULL-SIZE DIP CRYSTAL CLOCK OSCILLATORS ACO



FEATURES:

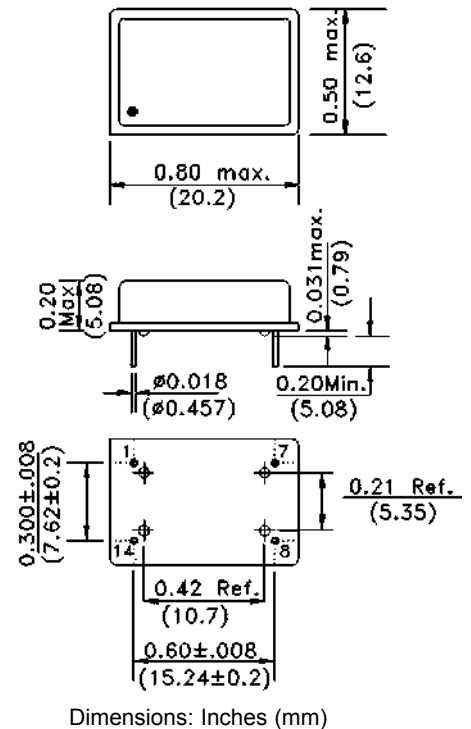
- Wide frequency range.
- Tight symmetry option.
- Fast rise and fall times.
- HCMOS and TTL compatible.
- Tristate Enable/Disable options.
- Anti-Static packaging tube.

APPLICATIONS:

- Provide clock signals for microprocessors and digital circuits.
- High output drive capability applications.

STANDARD SPECIFICATIONS

PARAMETERS	SPECIFICATIONS	
Frequency Range (F_0)	500Hz - 200MHz**	
Operating Temperature (T_{OPR})	0°C to +70°C	
Storage Temperature (T_{STO})	-55°C to +125°C	
Frequency Stability ($\Delta F / F_0$)	± 100 ppm max. (See Options)	
Supply Voltage (V_{dd})	5Vdc $\pm 10\%$	
Input Current (I_{dd})	30mA max. for $F < 24$ MHz 45mA max. for $F < 50$ MHz	70mA max. for $F < 80$ MHz 85mA max. for $F \geq 80$ MHz
Duty Cycle or Symmetry	45/55% max. for $F < 50$ MHz @ $1/2 V_{dd}$ (See Options) 40/60% max. for $F \geq 50$ MHz @ $1/2 V_{dd}$ (See Options)	
Rise and Fall Times (T_R / T_F)	10ns max. for $F \leq 24$ MHz 5ns max. for $F > 24$ MHz	
Output Load	10TTL or 15pF (50pF max.) for $F_0 < 80$ MHz 5TTL or 15pF for ($F_0 \geq 80$ MHz)	
Output Voltage	0.9 V_{dd} min. (V_{OH}) ; 0.4Vdc max. (V_{OL})	
Start-up Time (T_{OSC})	10ms max.	
Tristate Function (Option -A Only)	V_{IH} "1" or Open: Oscillation ≥ 2.2 V V_{IL} "0": Output disabled in high impedance (HiZ) < 0.8 V	
Output Disable / Enable Time	100ns max. (for Option "- A" ONLY)	



* Pin 1 has internal pull-up resistor which allows Pin 1 to be left floating (enable high) Option A

** Higher Frequencies available. Recommended handling, see appendix F.

Test circuit, waveforms, see appendix B. Reflow profile, see appendix E.

Environmental and mechanical specifications, see appendix C. Group 1. Marking, see appendix G.

Application notes, see appendix A. Value added, see appendix D.

PIN NUMBER	FUNCTION
1	NC or Tristate E/D
7	GND / Case
8	Output
14	Vdd

ORDERING OPTIONS

ACO - Frequency - Temperature - Overall Frequency Stability - Duty Cycle - Tristate - 50 - Value Added - Packaging

XX.XXXX MHz or kHz	-Y for ± 10 ppm max** -J for ± 20 ppm max -R for ± 25 ppm max -K for ± 30 ppm max -H for ± 35 ppm max -C for ± 50 ppm max	-S for 45/55% @ $1/2 V_{dd}$ -T for 47.5/52.5% @ $1/2 V_{dd}$ -S1 for 45/55% @ 1.4Vdc -T1 for 47.5/52.5% @ 1.4Vdc	50 pF load output drive	-TY for Tray packing
-D for -10°C to +60°C -E for -20°C to +70°C -F for -30°C to +70°C -N for -30°C to +85°C -L for -40°C to +85°C		-A for Tristate E/D	-G Gull Wing -GHT Gull Wing Reflow capable -QXX (Trimmed Leads)	

** Standard Operating Temperature Only Frequency 50 MHz max

NOTE: Left blank if standard • All specifications and markings subject to change without notice

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