

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



**FEATURES:**

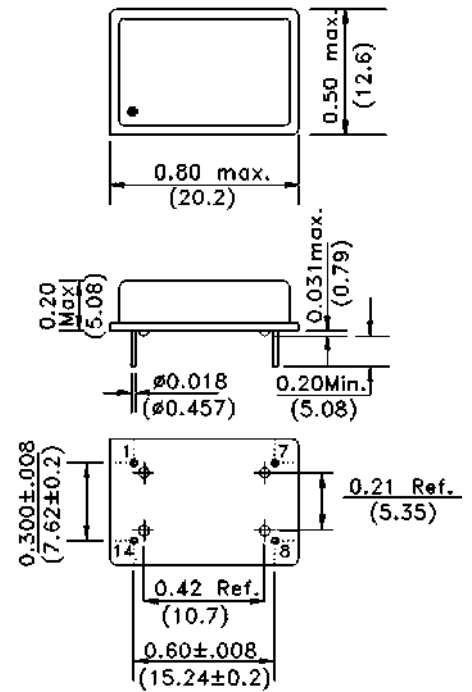
- Wide frequency range.
- Tight symmetry option.
- Fast rise and fall times.
- HCMOS and TTL compatible.
- Tristate Enable/Disable options.
- Anti-Static packaging tube.

**APPLICATIONS:**

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

**STANDARD SPECIFICATIONS**

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



PIN NUMBER	FUNCTION
1	NC or Tristate E/D
7	GND / Case
8	Output
14	V <sub>dd</sub>

\* 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.

**ORDERING OPTIONS**

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

XX.XXXX MHz or kHz	-Y for ± 10ppm max** -J for ± 20ppm max -R for ± 25ppm max -K for ± 30ppm max -H for ± 35ppm max -C for ± 50ppm max	-S for 45/55% @ 1/2V <sub>dd</sub> -T for 47.5/52.5% @ 1/2V <sub>dd</sub> -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

ABRACON IS  
 ISO 9001 / QS 9000  
 CERTIFIED

29 Journey • Aliso Viejo, CA 92656 • USA  
 (949) 448-7070 • FAX: (949) 448-8484

E-MAIL: [abinfo@abracon.com](mailto:abinfo@abracon.com) • INTERNET ADDRESS: [www.abracon.com](http://www.abracon.com)

