

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



FEATURES:

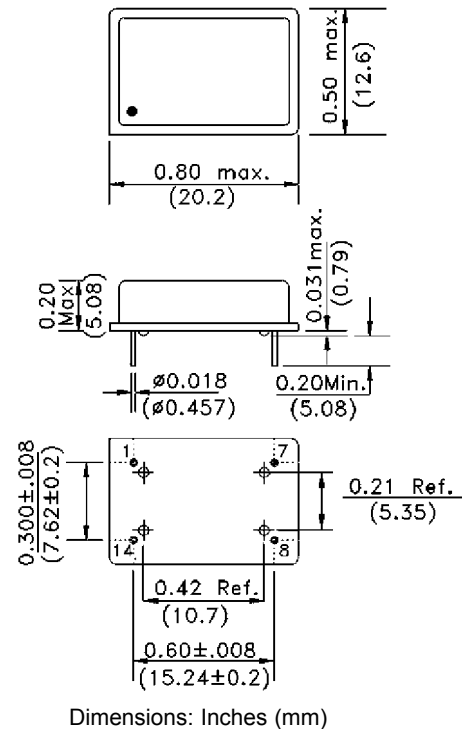
- Wide frequency range.
- Tight symmetry option.
- Fast rise and fall times.
- HCMOS and TTL compatible.
- Tristate Enable/Disable options.
- Anti-Static packaging tube.

APPLICATIONS:

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

STANDARD SPECIFICATIONS

| PARAMETERS | SPECIFICATIONS | |
|---|--|--|
| Frequency Range (F _O) | 500Hz - 200MHz** | |
| Operating Temperature (T _{OPR}) | 0°C to +70°C | |
| Storage Temperature (T _{STO}) | -55°C to +125°C | |
| Frequency Stability (ΔF/ F _O) | ±100ppm max. (See Options) | |
| Supply Voltage (V _{dd}) | 5Vdc ±10% | |
| Input Current (I _{dd}) | 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 _{dd} (See Options) 40/60% max. for F ≥ 50MHz @ 1/2V _{dd} (See Options) | |
| Rise and Fall Times (T _R / T _F) | 10ns max. for F ≤ 24MHz 5ns max. for F > 24MHz | |
| Output Load | 10TTL or 15pF (50pF max.) for F _O < 80MHz 5TTL or 15pF for (F _O) ≥ 80MHz | |
| Output Voltage | 0.9*V _{dd} min. (V _{OH}) ; 0.4Vdc max. (V _{OL}) | |
| Start-up Time (T _{OSC}) | 10ms max. | |
| Tristate Function (V _{IH}) (Option -A Only) (V _{IL}) | "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 _{dd} |

* 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

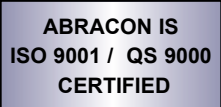
ACO - Frequency - Temperature - Overall Frequency Stability - Duty Cycle - Tristate - 50 - Value Added - Packaging

| | | | | |
|---|--|--|---|----------------------|
| 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 _{dd} -T for 47.5/52.5% @ 1/2V _{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 | | | -G Gull Wing -GHT Gull Wing Reflow capable -QXX (Trimmed Leads) | |

- A for Tristate E/D

** 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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