

12.7 x 12.7 x 5.6 mm

# 5Vdc • HCMOS/ TTL COMPATIBLE HALF-SIZE DIP CRYSTAL CLOCK OSCILLATORS ACH

## FEATURES:

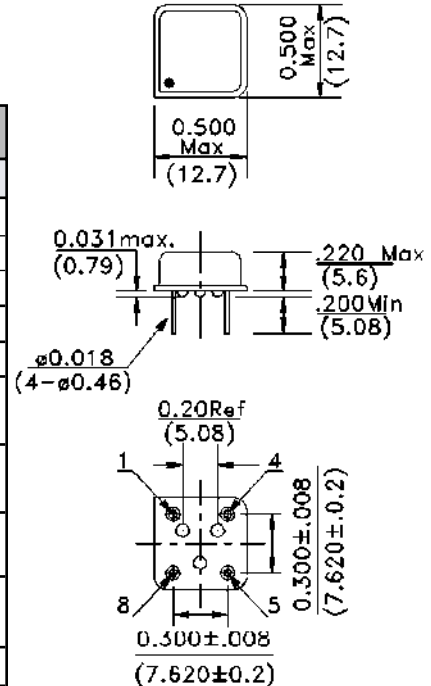
- Wide frequency range.
- Tight symmetry option.
- Fast rise and fall times.
- HCMOS and TTL compatible.
- Tristate Enable / Disable function.
- Anti-Static packaging tube.

## APPLICATIONS:

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

## STANDARD SPECIFICATIONS

PARAMETERS	SPECIFICATIONS
Frequency Range (F <sub>0</sub> )	<b>32.768kHz - 200MHz</b>
Operating Temperature (T <sub>OPR</sub> )	0°C to +70°C (See Options)
Storage Temperature (T <sub>STO</sub> )	-55°C to +125°C
Frequency Stability (ΔF/ F <sub>0</sub> )	±100ppm max. (See Options)
Supply Voltage (V <sub>dd</sub> )	5Vdc ±10%
Input Current (I <sub>dd</sub> )	30mA max. for F < 24MHz    70mA max. for F < 80MHz 45mA max. for F < 50MHz    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>0</sub> < 80MHz 5TTL or 15pF for (F <sub>0</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 (Option "-A" ONLY)	(V <sub>IH</sub> ) "1" or Open: Oscillation ≥ 2.2V (V <sub>IL</sub> ) "0": Output disabled in high impedance (HiZ) < 0.8V
Output Disable/ Enable Time	100ns max. (for Option "- A" ONLY)



Dimensions: Inches (mm)

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

\* Pin 1 has internal pull-up resistor which allows Pin 1 to be left floating (enable high) Option A. Test circuit, waveforms, see appendix B.  
Environmental and mechanical specifications, see appendix C. Group 1.  
Marking, see appendix G. Recommended handling, see appendix F.  
Application notes, see appendix A. Reflow profile see appendix E.

## ORDERING OPTIONS

**ACH - 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	50pF load output drive	- T for tape and reel -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 -G2 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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