



20 x 12.6 x 7.2 mm

# FUNDAMENTAL FREQUENCY, LOW JITTER 5.0V or 3.3Vdc FULL-SIZE DIP CRYSTAL CLOCK OSCILLATORS ACPE and ACPEL

## FEATURES:

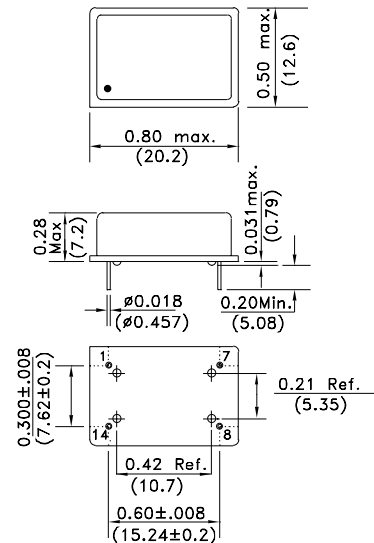
- Low jitter PECL logic.
- Tight overall frequency stability.
- Fast rise and fall times.
- Complementary output.
- Wide frequency range.

## APPLICATIONS:

- Gigabit ethernet.
- Data telecommunications and networking.
- xDSL, Stratum IV.
- SONET/SDH.

## STANDARD SPECIFICATIONS

PARAMETERS	ACPE	ACPEL
Frequency Range (F <sub>0</sub> )	10.00MHz - 200MHz	
Operating Temperature (T <sub>OPR</sub> )	0°C to +70°C (see options)	
Storage Temperature (T <sub>STO</sub> )	-55°C to +105°C	
Frequency Stability (ΔF/ F <sub>0</sub> )	±100ppm max. (See Options)	
Supply Voltage (V <sub>CC</sub> )	+5Vdc ±5%	+3.3Vdc ±5%
Supply Current (I <sub>DD</sub> )	100mA max.	
Duty cycle or Symmetry	40/60% max. measured 50% waveform	
Rise and Fall times (Tr/Tf)	2ns max. measured at 20% to 80% level	
Output	PECL square wave 10KH compatible	
Output and E/D options (pin 1)	No connection or Complementary output or E/D	
Output load	50Ω terminated into 3VDC or Thevenin equivalent	
Output voltage	VOH = V <sub>CC</sub> - 1.025V min., V <sub>CC</sub> - 0.74V max. VOL = V <sub>CC</sub> - 1.95V min., V <sub>CC</sub> - 1.60V max.	
Period Jitter	3.5ps RMS max.	
Enable/Disable option (pin 1)	VIL = V <sub>CC</sub> - 1.62V max., VIH = V <sub>CC</sub> - 1.025V min. (Output is in "0" state when disabled)	
Start-up time	10ms max.	



Dimensions: Inches (mm)

PIN NUMBER	FUNCTION
1	NC or $\bar{Q}$ or E/D
7	GND / Case
8	Output
14	V <sub>CC</sub>

\* Output must be terminated into 50Ω to +3VDC or Thevenin equivalent.  
Environmental and mechanical specifications, see appendix C. Group 1.  
Value added, see appendix D.  
Teat circuit and waveforms, see appendix B  
Marking, see appendix G. Recommended handling, see appendix F.  
Application notes, see appendix A.

## ORDERING OPTIONS

ACPEX - Frequency - Temperature - Overall Frequency Stability - Pin 1 option - Value Added

Blank or L

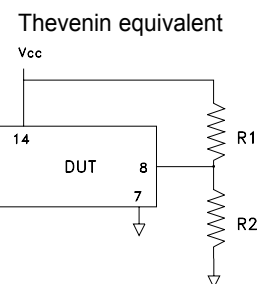
XX.XXXX MHz

-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

-Y for ± 10ppm max.  
-J for ± 20ppm max.  
-R for ± 25ppm max.  
-K for ± 30ppm max.  
-H for ± 35ppm max.  
-C for ± 50ppm max.

-Blank = N/C  
-QBAR = Complementary output  
-A = Enable/Disable

-G Gull Wing  
-QXX (Trimmed Leads)



Vdd	R1	R2
5.0V	82Ω	130Ω
3.3V	130Ω	82Ω

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



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