



# CRYSTAL CONTROLLED OSCILLATORS

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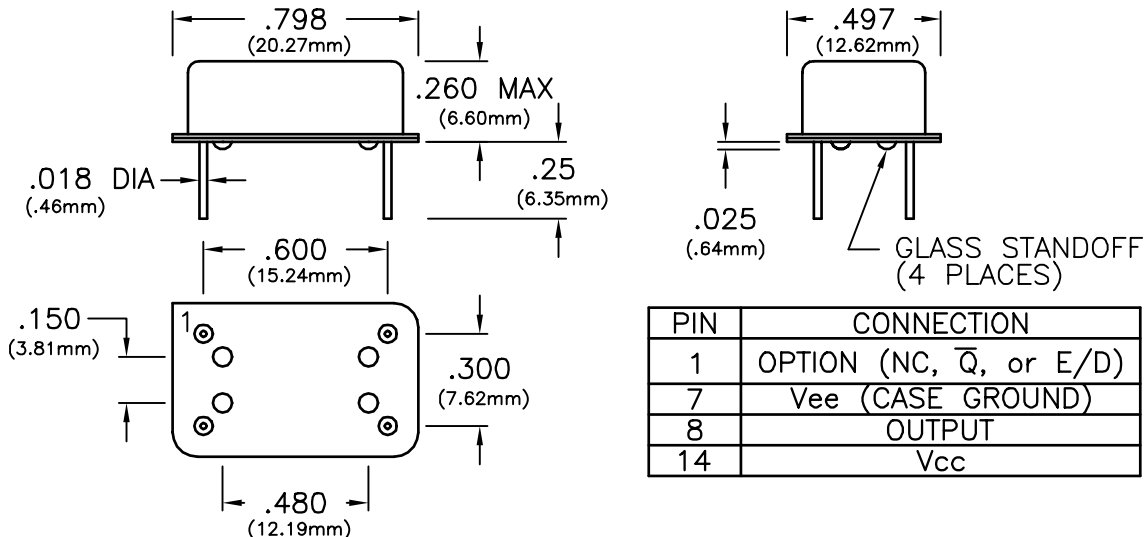
## 14 PIN DIP ECL PLL FREQUENCY MULTIPLIER

SPECIFICATIONS	GA13-52*	GA13-53*	GA13-54*	GA13-62*	GA13-63*	GA13-64*	
Available Frequency Ranges	120 to 135 MHz 144 to 168 MHz 174 to 205 MHz 232 to 270 MHz 288 to 336 MHz 348 to 410 MHz 464 to 540 MHz 576 to 672 MHz			144 to 168 MHz 174 to 205 MHz 288 to 336 MHz 348 to 410 MHz 576 to 672 MHz			
Frequency Stability	±50ppm	±100ppm	±20ppm	±50ppm	±100ppm	±20ppm	
	Inclusive of calibration tolerance at 25°, operating temperature range, supply voltage change, load change, aging, shock and vibration.						
Operating Temp Range	0°C to +70°C			-40°C to +85°C			
Storage Temp Range	-55°C to +125°C						
Output	Waveform	PECL Squarewave , 100K Compatible					
	Load	Output must be terminated into 50 Ohms to 3Vdc.					
	Voltage	Voh	4.0V Minimum , 4.5V Maximum				
		Vol	2.90V Minimum , 3.4V Maximum				
	Symmetry	45/55 Maximum measured at 50% level					
	Rise/Fall Time	750pS Maximum					
	Jitter	10pS rms Maximum					
	SSB Phase Noise	-100dBc/Hz typical @ 10KHz offset					
Enable/ Disable Option (Pin 1):	Enable (Vil)	0.5Vdc Maximum					
	Disable (Vih)	1.5Vdc Minimum					
		Q (Pin 8) disables to low state. When Pin 1 is floating, output is in disabled state.					
Supply Voltage (Vee)	+5Vdc ±5%						
Supply Current	100mA Maximum						
Package	All metal, hermetically sealed, welded package						
Options * - add suffix to model number	0	Pin 1: No Connection					
	1	Pin 1: Complementary Output					
	2	Pin 1: Enable/Disable					

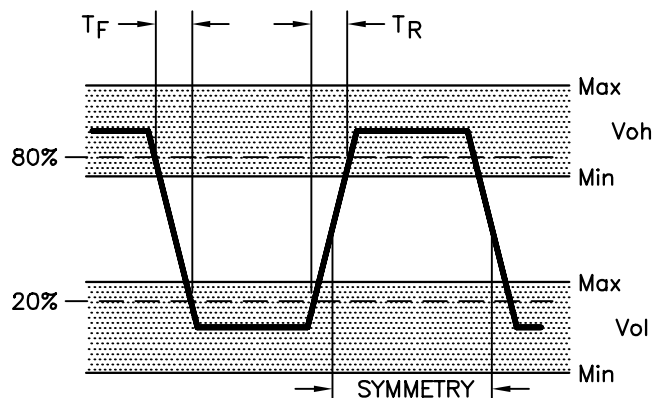
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REV: 09  
DATE: 2/8/01

Specifications subject to change without notice. C-W © 2000  
ISSUED BY: \_\_\_\_\_  
Dimensional Tolerance: ±.02"  
±.005"



## OUTPUT WAVEFORM



## TEST CIRCUIT

