



CRYSTAL CONTROLLED OSCILLATORS

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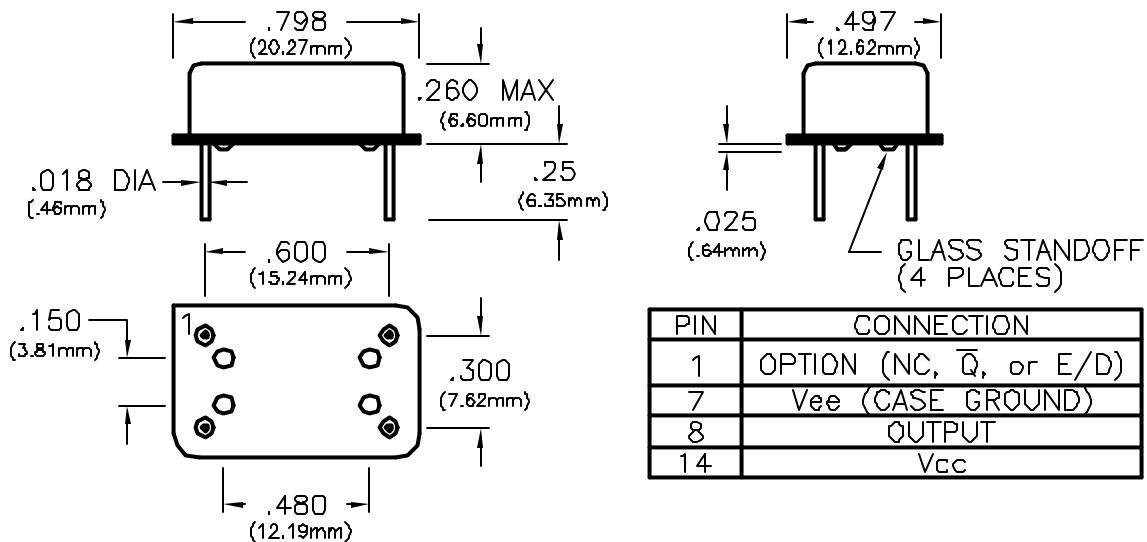
14 PIN DIP ECL PLL FREQUENCY MULTIPLIER

| 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 700 to 800 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 | | | | | |
| Waveform | PECL Squarewave, 100K Compatible | | | | | |
| Load | Output must be terminated into 50 Ohms to 3Vdc. | | | | | |
| Voltage $\frac{V_{oh}}{V_{ol}}$ | 4.0V Minimum, 4.5V Maximum | | | | | |
| | 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 | 0 | Pin 1: No Connection | | | | |
| * - add suffix to model number | 1 | Pin 1: Complementary Output | | | | |
| | 2 | Pin 1: Enable/Disable | | | | |

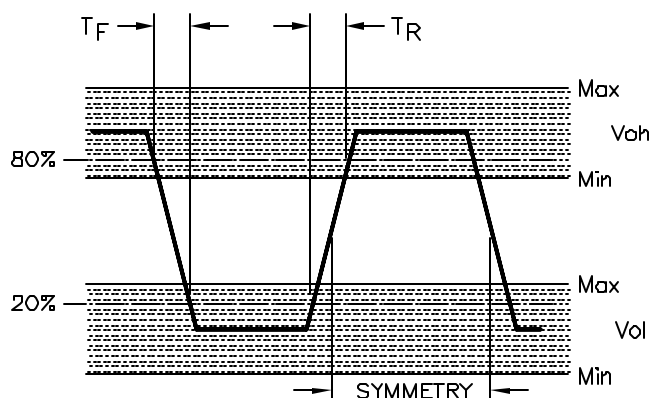
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REV: 10
DATE: 9/28/04

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



OUTPUT WAVEFORM



TEST CIRCUIT

