

## HIGH FREQUENCY VCXO OSCILLATORS

| SPECIFICATIONS           |                           |     | HV61—*                                                                                | HV62—*                                      | HV63—*  | HV64—* |
|--------------------------|---------------------------|-----|---------------------------------------------------------------------------------------|---------------------------------------------|---------|--------|
| Frequency Range          |                           |     | 30MHz to 100MHz                                                                       |                                             |         |        |
| Frequency vs Temperature |                           |     | ±25ppm                                                                                | ±50ppm                                      | ±100ppm | ±20ppm |
| Temperature Range        |                           |     | −40°C to +85°C                                                                        |                                             |         |        |
| Output                   | Waveform                  |     | HCMOS Squarewave                                                                      |                                             |         |        |
|                          | Voltage                   | Voh | 4.5V Minimum                                                                          |                                             |         |        |
|                          |                           | Vol | 0.5V Maximum                                                                          |                                             |         |        |
|                          | Current                   | Ioh | −8mA (30 to 52MHz) , −16mA (52.1 to 100MHz)                                           |                                             |         |        |
|                          |                           | Iol | 8mA (30 to 52MHz) , 16mA (52.1 to 100MHz)                                             |                                             |         |        |
|                          | Duty Cycle                |     | 40/60 Maximum                                                                         |                                             |         |        |
|                          | Rise/Fall Time            |     | 3nS Maximum, 15pF Load                                                                |                                             |         |        |
|                          | Jitter (RMS)              |     | 5pS Maximum over 10Hz to 20MHz bandwidth<br>1pS Maximum over 12KHz to 20MHz bandwidth |                                             |         |        |
|                          | SSB Phase Noise (Typical) |     | −60dBc/Hz @ 10Hz , −140dBc/Hz @ 10KHz                                                 |                                             |         |        |
| Frequency Control        |                           |     | * Deviation Code (add to model number)                                                |                                             |         |        |
|                          |                           |     | 100                                                                                   | (±50ppm Minimum)                            |         |        |
|                          |                           |     | 150                                                                                   | (±75ppm Minimum)                            |         |        |
|                          |                           |     | 160                                                                                   | (±80ppm Minimum)                            |         |        |
|                          |                           |     | 200                                                                                   | (±100ppm Minimum) Not available above 70MHz |         |        |
|                          |                           |     | 300                                                                                   | (±150ppm Minimum) Not available above 50MHz |         |        |
|                          |                           |     | Positive Transfer Characteristic                                                      |                                             |         |        |
| Control Voltage          |                           |     | 0.5Vdc to 4.5Vdc                                                                      |                                             |         |        |
| Center Frequency         |                           |     | 2.5Vdc ±0.5Vdc                                                                        |                                             |         |        |
| Monotonic Linearity      |                           |     | < ±10%                                                                                |                                             |         |        |
| Input Impedance          |                           |     | ≥ 50K ohms                                                                            |                                             |         |        |
| Modulation Bandwidth     |                           |     | ≥ 15KHz                                                                               |                                             |         |        |
| Supply Voltage           |                           |     | +5Vdc ±5%                                                                             |                                             |         |        |
| Supply Current           |                           |     | 35mA Max <50MHz , 60mA Max <100MHz                                                    |                                             |         |        |
| Package                  |                           |     | All metal, hermetically sealed, welded package                                        |                                             |         |        |
| Option (add suffix)      |                           |     | S                                                                                     | Duty Cycle 45/55 Maximum                    |         |        |

**WARNING!** Do not insert oscillator into a hot circuit. Failure to comply will result in damage to oscillator.

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### EXAMPLE MODEL NUMBER

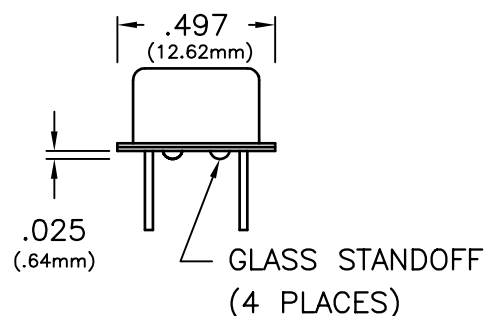
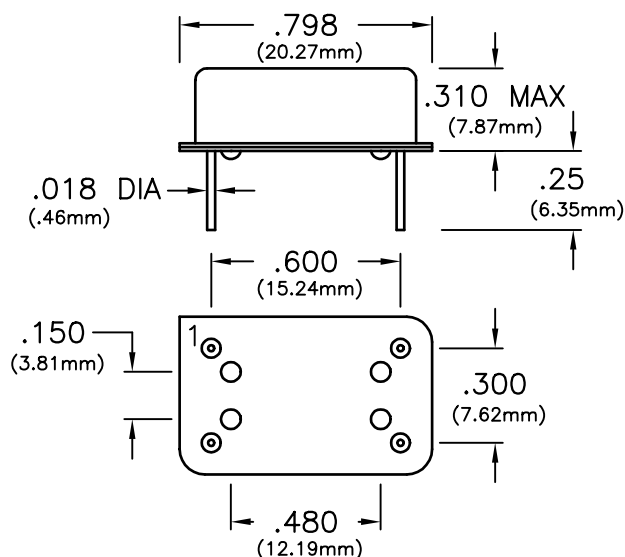
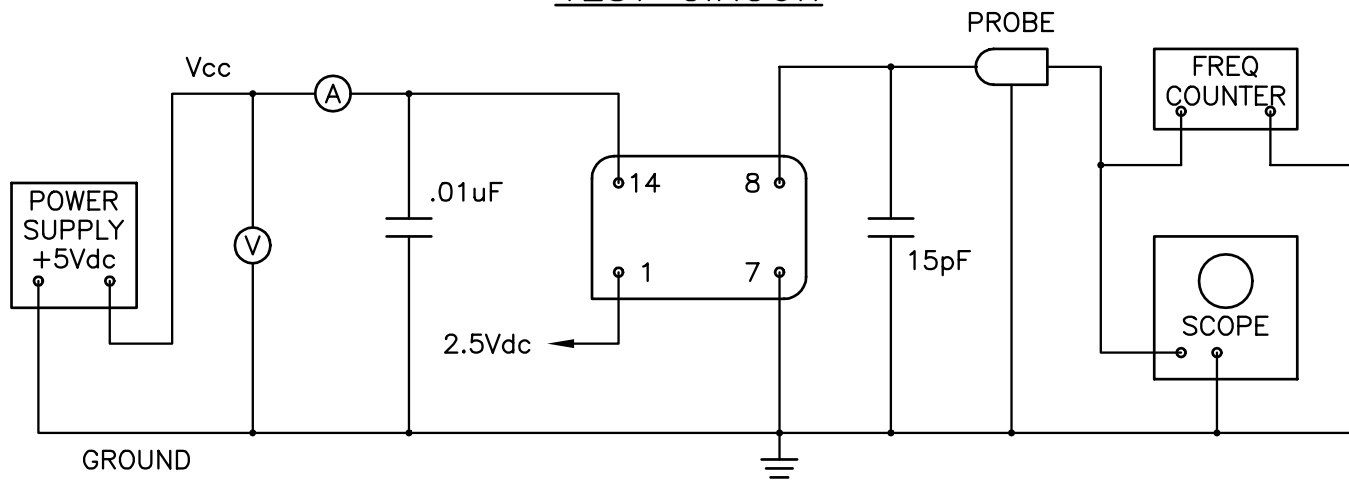
H V 6 3 - 1 0 0 / 4 4 . 7 3 6 M H z

VCXO SERIES

MINIMUM DEVIATION OF  
 $\pm 50$ ppm FROM 0.5  
TO 4.5Vdc CONTROL  
VOLTAGE.

CENTER FREQUENCY

### TEST CIRCUIT



| PIN | CONNECTION      |
|-----|-----------------|
| 1   | CONTROL VOLTAGE |
| 7   | GROUND (CASE)   |
| 8   | OUTPUT          |
| 14  | (+) SUPPLY      |