






# PLETRONICS OeXO's®

RoHS 6/6 Compliant

## OCXO equivalent Crystal Oscillators

RoHS Compliant

| Series  | Features  | Stability   | Package Size                                     |
|---|---|---|--|
|  <b>OeD4</b>   | 10 MHz–40 MHz<br>♦ CMOS<br>♦ 2.8 V to 3.3 V<br>♦ EFC of ±5.0 ppm min available                                | ± 50ppb over 0° to +70°C<br>± 200ppb over –40° to +85°C<br>± 4.6 ppm over all conditions for 15 years | 3.2 x 5.0 mm<br>Ceramic LCC                      |
|  <b>OeA4</b>   | 10 MHz–40 MHz<br>♦ CMOS<br>♦ 2.8 V to 3.3 V<br>♦ EFC of ±5.0 ppm min available                                | ± 50ppb over 0° to +70°C<br>± 200ppb over –40° to +85°C<br>± 4.6 ppm over all conditions for 15 years | 5.0 x 7.0 mm<br>Ceramic LCC                      |
|  <b>OeM4</b>   | 10 MHz–40 MHz<br>♦ CMOS<br>♦ 2.8 V to 3.3 V<br>♦ EFC of ±5.0 ppm min available<br>♦ Used on GPS Product lines | ± 50ppb over 0° to +70°C<br>± 200ppb over –40° to +85°C<br>± 4.6 ppm over all conditions for 15 years | Through Hole<br>DIP/DIL<br>Equivalent to<br>OHM4 |
|  <b>OeM8</b>  | 9.6 MHz–26 MHz<br>♦ CMOS<br>♦ 3.3 V only<br>♦ EFC of ±5.0 ppm min available                                   | ± 50ppb over –40° to +85°C<br>± 4.6 ppm over all conditions for 15 years                              | Through Hole<br>DIP/DIL                          |
|  <b>OeS8</b> | 9.6 MHz–26 MHz<br>♦ CMOS<br>♦ 3.3 V only<br>♦ EFC of ±5.0 ppm min available                                   | ± 50ppb over –40° to +85°C<br>± 4.6 ppm over all conditions for 15 years                              | Surface<br>Mount<br>Equivalent to<br>OeM8        |

### Comparison of the Pletronics OCXO and OeXO® Performance





| Specification                                 | OHM4 DIP/DIL OCXO   | OeA4, OeD4, OeM4, OeM8       | Remark                          |
|---|---------------------|------------------------------|---------------------------------|
| Stability 0°C to 70°C                         | ± 0.05              | ± 0.05                       | ppm                             |
| Stability –40°C to 85°C                       | ± 0.20              | ± 0.20                       | OeM8 +/-0.05ppm                 |
| Aging 1 <sup>st</sup> year                    | ± 0.3               | ± 0.3                        |                                 |
| 10 years                                      | ± 2.5               | ± 2.5                        |                                 |
| Phase Noise 10Hz                              | -100                | -100                         | dBc/Hz                          |
| 100Hz   | -130                | -120                         |                                 |
| 1KHz  | -140                | -144                         |                                 |
| 10KHz   | -145                | -151                         |                                 |
| Warm up time to reach the specified frequency | 120 seconds at 25°C | <1 second at any temperature |                                 |
| Power Supply Current                          | 170 mA              | 5 mA                         | at –20°C                        |
|   | 110 mA              | 5 mA                         | at 30°C                         |
|   | 250 mA              | 5 mA                         | at turn on and up to 30 seconds |

# PLETRONICS

## OCXO'S

### Oven Controlled Crystal Oscillators

RoHS Compliant

| Series   | Features   | Stability   | Package Size  |
|--|--|---|---|
|  <b>OHM4</b>                        | 10 MHz–120 MHz<br>♦ <u>CMOS</u><br>♦ 3.3 V or 5.0 V<br>♦ High Accuracy<br>♦ EFC ±15.0 ppm min available.   | $\pm 25\text{ppb}$ over 0° to +60°C<br>$\pm 250\text{ppb}$ over -40° to +85°C | Through Hole<br>DIP/DIL   |
|  <b>OHM4<br/>STRATUM 3</b>          | 10 MHz–40 MHz<br>♦ <u>CMOS</u><br>♦ 3.3 V or 5.0 V<br>♦ High Accuracy<br>♦ EFC ±15.0 ppm min available   | $\pm 4.6\text{ ppm}$ over all conditions for 15 years                         | Through Hole<br>DIP/DIL   |
|  <b>OSM4</b>                      | 10 MHz–120 MHz<br>♦ <u>Sine Wave</u><br>♦ 3.3 V or 5.0 V<br>♦ High Accuracy<br>♦ EFC ±15.0 ppm min available.  | $\pm 0.5\text{ ppm}$ over -30° to +85°C                                       | Through Hole<br>DIP/DIL   |
| <b>Specialized<br/>OCXO's</b><br> | 10 MHz–150 MHz<br>♦ Engineered to customer specifications<br>♦ Double Ovens<br>♦ MIL and IEC standards<br>♦ Stratum III and IIIe<br>♦ Ultra low phase noise<br>♦ Sine Wave, CMOS, PECL and LVDS outputs<br>♦ Oven Alarms<br><br>See Specialized OCXO guide | Stabilities available to<br>$\pm 5.0\text{ ppb}$ over -40° to +85°C           | Industry standard<br>and custom<br>packages<br><br>Vibration isolated<br>packages |

### APPLICATIONS

### COMMON FREQUENCIES (MHz)

|                          |       |       |
|--------------------------|-------|-------|
| ♦ Wireless Communication | 10    | 20    |
| ♦ Base stations          | 12.8  | 20.48 |
| ♦ Handsets               | 13    | 25    |
| ♦ Point to point radios  | 16    | 26    |
| ♦ Broadband access       | 16.8  | 27    |
| ♦ GPS                    | 19.2  | 38.4  |
| ♦ Test equipment         | 19.44 | 40    |