

# K1602SE Series

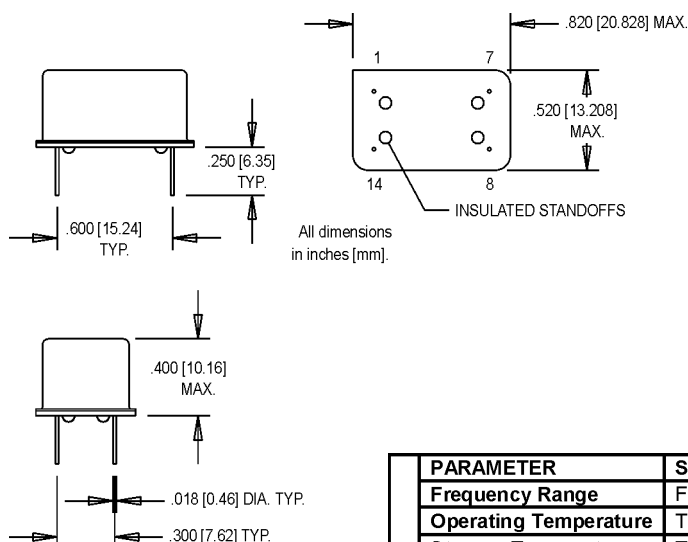
## 14 DIP, 5.0 Volt, Sinewave, TCVCXO



- Former **Champion** Product  
TECHNOLOGIES, INC.
- Phase-Locked Loops, SONET, Reference Signal, Signal Tracking, ATM

### Ordering Information

|                                |                         |    |             |
|--------------------------------|-------------------------|----|-------------|
|                                | K1602SE                 | -R | 00.0000 MHz |
| Product Series                 |                         |    |             |
| RoHS Compliance                |                         |    |             |
| Blank:                         | non-RoHS compliant part |    |             |
| -R:                            | RoHS compliant part     |    |             |
| Frequency (customer specified) |                         |    |             |



### Pin Connections

| PIN | FUNCTION             |
|-----|----------------------|
| 1   | EFC, Control Voltage |
| 7   | Ground/Case Gnd      |
| 8   | Output               |
| 14  | +Vdd                 |

|                             | PARAMETER             | Symbol                                                                                | Min.   | Typ.  | Max.   | Units   | Condition/Notes               |
|-----------------------------|-----------------------|---------------------------------------------------------------------------------------|--------|-------|--------|---------|-------------------------------|
|                             |                       |                                                                                       |        |       |        |         |                               |
| edElectrical Specifications | Frequency Range       | F                                                                                     | 90     |       | 115    | MHz     |                               |
|                             | Operating Temperature | T <sub>A</sub>                                                                        | -40    |       | +85    | °C      |                               |
|                             | Storage Temperature   | T <sub>S</sub>                                                                        | -40    |       | +85    | °C      |                               |
|                             | Frequency Stability   | ΔF/F                                                                                  |        |       | ±7.0   | ppm     | See Note 1                    |
|                             | Aging (10 year)       |                                                                                       | -2     |       | +2     | ppm     |                               |
|                             | Control Voltage       | V <sub>c</sub>                                                                        | 0      | 2.0   | 4      | V       | Positive monotonic slope      |
|                             | Tuning Range          |                                                                                       | ±4     |       | ±15    | ppm     | V <sub>c</sub> = 0.5V to 3.5V |
|                             | Modulation Bandwidth  | f <sub>m</sub>                                                                        |        |       |        | kHz     | ±3dB                          |
|                             | Input Impedance       | Z <sub>in</sub>                                                                       | 50k    |       |        | Ω       | @ 10kHz                       |
|                             | Input Voltage         | V <sub>dd</sub>                                                                       | 4.75   | 5.0   | 5.25   | V       |                               |
|                             | Input Current         | I <sub>dd</sub>                                                                       |        |       | 20     | mA      |                               |
|                             | Output Type           |                                                                                       |        |       |        |         | Sinewave                      |
|                             | Load                  |                                                                                       |        | 50 Ω  |        |         | See Note 2                    |
|                             | Output Level          |                                                                                       | 1.0    |       |        | V p-p   | Into 50 Ω                     |
|                             | Output Power          | P <sub>o</sub>                                                                        |        | +2    | +4     | dBm     | 50 Ω                          |
| Environmental               | Start up Time         |                                                                                       |        |       | 10     | ms      |                               |
|                             | Phase Noise (Typical) | 10 Hz                                                                                 | 100 Hz | 1 kHz | 10 kHz | 100 kHz | Offset from carrier           |
|                             |                       | -65                                                                                   | -95    | -120  | -140   | -150    | dBc/Hz                        |
|                             | Mechanical Shock      | Per MIL-STD-202, Method 213, Condition C (100 g's, 6 ms duration, ½ sinewave)         |        |       |        |         |                               |
|                             | Vibration             | Per MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz)                            |        |       |        |         |                               |
|                             | Hermeticity           | Per MIL-STD-202, Method 112, (1x10 <sup>-8</sup> atm. cc/s of Helium)                 |        |       |        |         |                               |
|                             | Thermal Cycle         | Per MIL-STD-883, Method 1010, Condition B (-55°C to +125°C, 15 min. dwell, 10 cycles) |        |       |        |         |                               |
|                             | Solderability         | Per EIAJ-STD-002                                                                      |        |       |        |         |                               |
|                             | Soldering Conditions  | +240°C max. for 10 secs.                                                              |        |       |        |         |                               |

1. Inclusive of calibration, temperature, voltage, load and aging.
2. See load circuit diagram #8

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