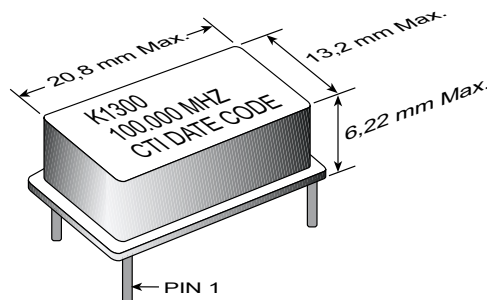


- TTL/CMOS Compatible
- Tri-State Feature for Auto Test Systems
- Fast Rise and Fall Times
- 70 to 120 MHz Frequency Range
- Tight Symmetry (45/55%) Available
- $\pm 100\text{ppm}$  Stability Standard
- $\pm 50\text{ppm}$  Stability Available - K1350



## ELECTRICAL SPECIFICATIONS

| MODEL                            | K1300                                                                         | K1350    |
|----------------------------------|-------------------------------------------------------------------------------|----------|
| <b>Frequency Range (MHz)</b>     | 70 to 120                                                                     |          |
| <b>Frequency Stability (ppm)</b> |                                                                               |          |
| Overall (Typical)                | Inclusive of calibration, temperature, voltage, load, shock, vibration, aging |          |
| 0°C to 70°C                      | $\pm 100$                                                                     | $\pm 50$ |
| <b>Temperature Range (°C)</b>    |                                                                               |          |
| Operating                        | 0°C to +70°C                                                                  |          |
| Storage                          | -55°C to +125°C                                                               |          |
| <b>Supply Voltage (V)</b>        | +5.0 $\pm 5\%$                                                                |          |
| <b>Output TTL</b>                |                                                                               |          |
| Input Current (mA)               | 50 -80 max                                                                    |          |
| Symmetry (%)                     | 40/60 @ 1.4V                                                                  |          |
| $T_R$ and $T_F$ (ns)             | 5 (0.5V to 2.5V)                                                              |          |
| Fanout                           | 10                                                                            |          |
| <b>Output CMOS</b>               |                                                                               |          |
| Input Current (mA)               | 100 max                                                                       |          |
| Symmetry (%)                     | 40/60 @ 0.5V <sub>CC</sub>                                                    |          |
| $T_R$ and $T_F$ (ns)             | 5 (20% -80 % V <sub>CC</sub> )                                                |          |
| <b>Start up Time (ms)</b>        |                                                                               |          |
| TTL                              | <10                                                                           |          |
| CMOS                             | <45                                                                           |          |

## PART NUMBERING GUIDE

**K13XXXX** - Specify Frequency

“Blank” = TTL Output

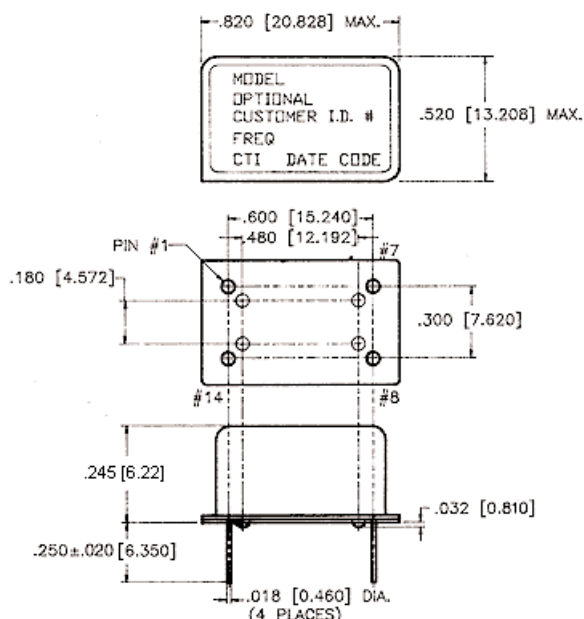
“C” = CMOS Output

“Blank” = 40/60% Symmetry

“S” = 45/55% Symmetry (Available to 100MHz.)

“00” =  $\pm 100\text{ppm}$  Stability

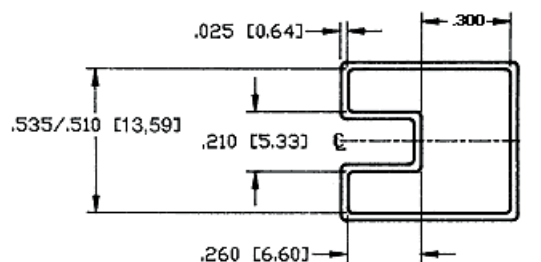
“50” =  $\pm 50\text{ppm}$



| PIN | FUNCTION         |
|-----|------------------|
| 1   | Tri-State*       |
| 2   | Ground           |
| 3   | Output           |
| 4   | +V <sub>CC</sub> |

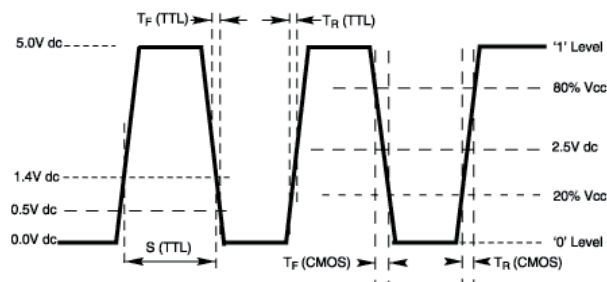
\* Input tied internally to +5V. External input if any, should not be less than +3V and not greater than +3.8V for TTL version. For CMOS models, enable with either an open circuit or +5V.

#### SHIPPING TUBE CROSS SECTION

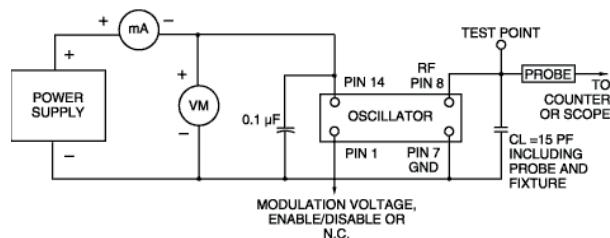


ALL DIMENSIONS ARE INSIDE

#### OUTPUT WAVEFORM



#### TEST CIRCUIT DIAGRAM



#### MECHANICAL AND ENVIRONMENTAL SPECIFICATIONS

| TEST METHODS            | REFERENCE PROCEDURES                 | DESCRIPTION                                            |
|-------------------------|--------------------------------------|--------------------------------------------------------|
| Temperature Cycle       | MIL-STD-833, Mtd 1010, Cond. B       | -55°C to +125°C; Air-to-Air; 100 cycles; 10 min. dwell |
| Mechanical Shock        | MIL-STD-883, Mtd 2002, Cond. B       | 1500 g's                                               |
| Vibration               | MIL-STD 883, Mtd 2007, Cond. B       | 20-2000 Hz; 0.06 inch; 15g's; 3 planes                 |
| Humidity Steady State   | MIL-STD-202, Mtd 103                 | 40°C; 90%-95% R.H.; 56 days                            |
| Thermal Shock           | MIL-STD-883, Mtd 1011.7 Cond. B      | 100°C to 0°C; Water-to-Water; 15 cycles                |
| Electrostatic Discharge | MIL-STD-883, Mtd 3015 Class II       | 2 KV to 4 KV Threshold                                 |
| Solderability           | MIL-STD-883, Mtd 2022.2              | Solder dip; Meniscograph Criteria                      |
| Hermeticity             | MIL-STD-883, Mtd 1014.8, Cond. A1    | Mass spectro. 2 x 10 <sup>-8</sup> atmos. CC/sec He    |
| Resistance to Soldering | MIL-STD-202, Mtd 210D, Cond. J       | 235°C; 30 seconds                                      |
| Lead Integrity          | MIL-STD-883, Mtd 2004.5, Cond. A, B1 | Lead tension & bend stress                             |
| Marking Permanence      | MIL-STD-883, Mtd 2015.8              | Resistance to solvents                                 |
| Life Test               | MIL-STD-883, Mtd 1005.6              | 125°C, powered, 1000 hours minimum                     |