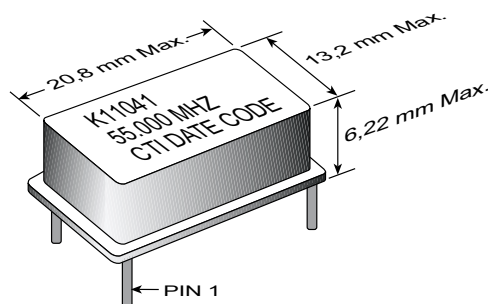


### 5V Clock Driver For 32-Bit Micro-processors

- 40MHz to 70MHz Frequency Range
- TTL Compatible Waveform
- Load Capacity of 50pF
- Rise Time of 1.7ns Max., Fall Time of 1.6ns Max. for Meeting Tight Electrical Specifications of the High Speed Motorola MC68030 and MC68040
- Tri-State Output
- "M" Models Operate -40°C to 85°C
- Replaces Model K11040T



#### K11041 Capabilities

The Champion Technologies K11041 Data Clock Oscillator is designed specifically to drive the Motorola MC68030 and MC68040 families of 32-bit micro-processors. This device also provides precise timing for 486 and Pentium® processors. Meeting these stringent requirements also makes the K11041 ideal for other applications requiring tightly controlled duty cycle or very fast rise and fall times.

**Popular frequencies** of the K11041 Series Clocks are 40.000 MHz, 60.000 MHz and 66.667 MHz. Other frequencies available.

Pentium® is a registered trademark of Intel Corp.

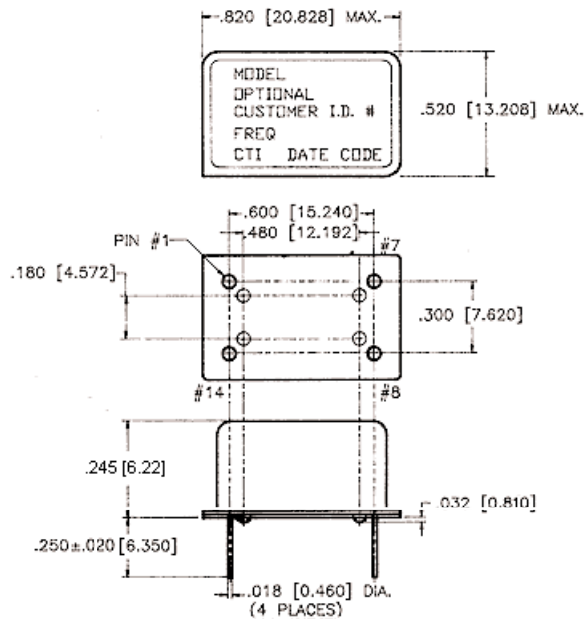
#### ELECTRICAL SPECIFICATIONS

| MODEL                     | K11041                                                                        |
|---------------------------|-------------------------------------------------------------------------------|
| Frequency Range (MHz)     | Discrete Frequencies to 140MHz                                                |
| Frequency Stability (ppm) |                                                                               |
| Overall                   | Inclusive of calibration, temperature, voltage, load, shock, vibration, aging |
| 0°C to 70°C               | ±100                                                                          |
| Temperature Range (°C)    |                                                                               |
| Operating                 | 0°C to +70°C                                                                  |
| Storage                   | -55°C to +125°C                                                               |
| Supply Voltage (V)        | +5V ±5%                                                                       |
| Supply Current (mA)       | 50 (C <sub>L</sub> = 50pF)                                                    |
| Output TTL                |                                                                               |
| Symmetry (%)              | 45/55 @ V <sub>m</sub>                                                        |
| "0" Level (VOL)           | 0.4V min. @ I <sub>OL</sub> = +24mA                                           |
| "1" Level (VOH)           | 2.5V min. @ I <sub>OH</sub> = -24mA                                           |
| Start Up Time (ms)        | < 20                                                                          |
| Phase Jitter (ps)         | < 100                                                                         |

#### PART NUMBERING GUIDE

**K11041X** - Specify Frequency

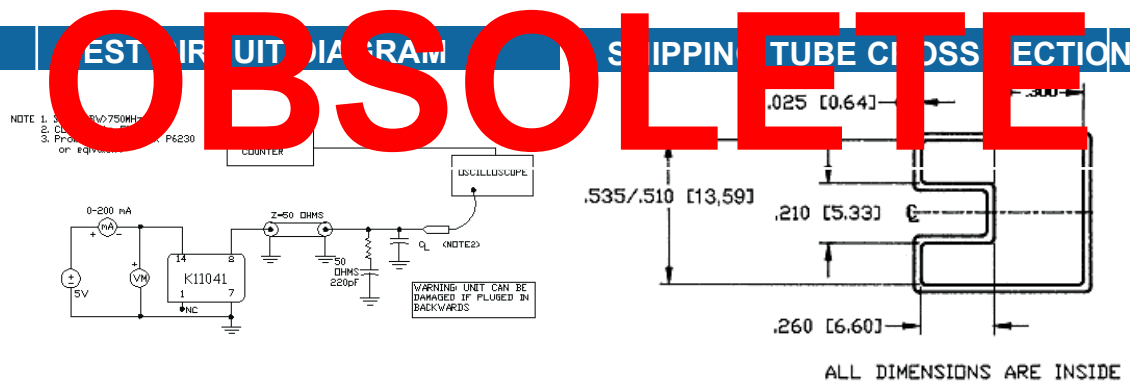
→ "Blank" = 0°C to 70°C Operating Temperature  
 "M" = -40°C to 85°C Operating Temperature



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

*\* Input tied internally to +3.3V dc. External input if any, should not be less than +3V and not greater than +3.8V dc.*

| Tri-State Control*        |                |
|---------------------------|----------------|
| PIN 1                     | PIN 8          |
| Low ( $V_L = 1.35V$ Max.) | High Impedance |
| Open*                     | $F_O$          |



## 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 10-8 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                     |