

# HYBRID CLOCK OSCILLATORS E11XX

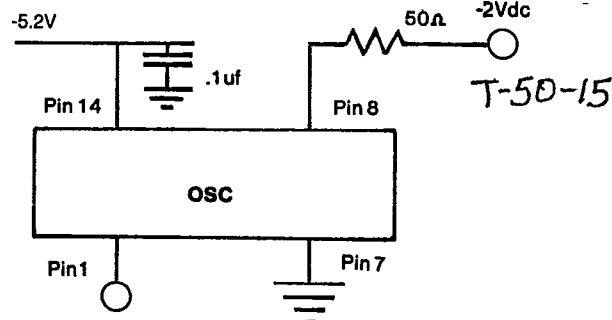
4 PIN DIP RESISTANCE WELD PACKAGE  
HERMETICALLY SEALED  
IDEAL FOR HIGH SPEED COMPUTER TIME CLOCKS

| MODEL                 | E11XX                                                      |
|-----------------------|------------------------------------------------------------|
| Frequency Range       | 20MHz to 200MHz                                            |
| Frequency Stability   | See Table 1                                                |
| Operating Temperature |                                                            |
| Storage Temperature   | -55°C to 125°C                                             |
| Input Voltage         | -5.2V $\pm$ 5%                                             |
| Input Current         | 140mA                                                      |
| Output Symmetry       | 60/40° @ 1/2Vp-p                                           |
| Output Rise/Fall Time | Less than 4 nSec. measured between 20 to 80% voltage level |
| "0" / "1" Level       | -1.6V max. / -1V min.                                      |
| Output Load           | Typical 50 ohms to -2.0V DC                                |

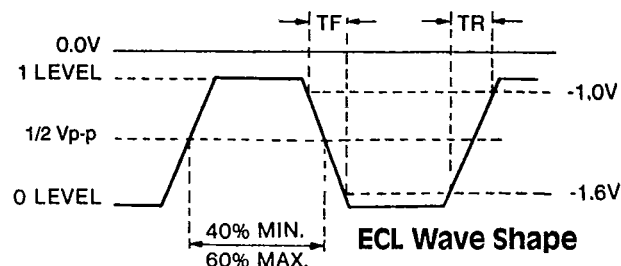
ECL Compatible

T-50-23

T-50-15



ECL Load Circuit



PIN

ECL Pin Configuration

|    | AA           | AM           | AE               | AB           | AC           | AAC          | AMC          | ACC          |
|----|--------------|--------------|------------------|--------------|--------------|--------------|--------------|--------------|
| 1  | GND/Case GND | NC           | Enable/Disable * | NC           | NC           | Comp Output  | Comp Output  | Comp Output  |
| 7  | -5.2V        | GND/Case GND | -5.2V            | -5.2V        | GND/Case GND | -5.2V        | GND/Case GND | GND/Case GND |
| 8  | Output       | Output       | Output           | Output       | Output       | Output       | Output       | Output       |
| 14 | GND          | -5.2V        | GND/Case GND     | GND/Case GND | +5.2 V       | GND/Case GND | -5.2V        | +5.2V        |

See Figure 1, Page 2 for Package

\* Specify output state Hi or Low for disable

# HYBRID CLOCK OSCILLATORS V11XX

VOLTAGE CONTROLLED OSCILLATOR  
IDEAL FOR PHASE LOCKED LOOP SYSTEMS

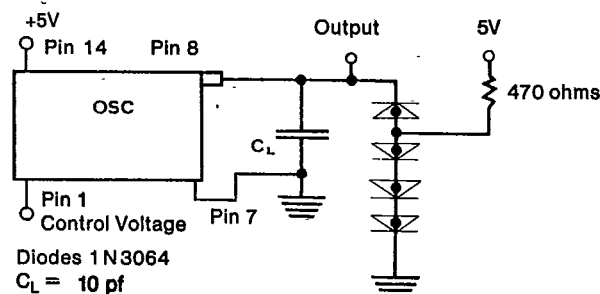
| MODEL                           | V11XX                                 |
|---------------------------------|---------------------------------------|
| Frequency Range                 | 900KHz to 23MHz                       |
| Frequency Stability             | +50 PPM                               |
| Operating Temperature           | 0°C to 70°C                           |
| Storage Temperature             | -10°C to 85°C                         |
| Input Voltage                   | + 5V $\pm$ 0.5V                       |
| Frequency Control               | +0.5 V to +5V                         |
| Frequency Deviation Sensitivity | min. 60 PPM / Volt at VC = +2V to +3V |
| Frequency Nominal Sensitivity   | VC = +2.5V $\pm$ .5V                  |
| Output Symmetry                 | 60/40% @ 1.4V Level                   |
| Output Rise / Fall Time         | 15nS (0.4 to 2.4V Levels)             |
| "0" / "1" Levels                | 0.5V max. / 2.4V min.                 |
| Output Load                     | 1 to 5 TTL Loads                      |

| PIN | CONNECTION      |
|-----|-----------------|
| 1   | Control Voltage |
| 7   | GND/Case GND    |
| 8   | Output          |
| 14  | +5V             |

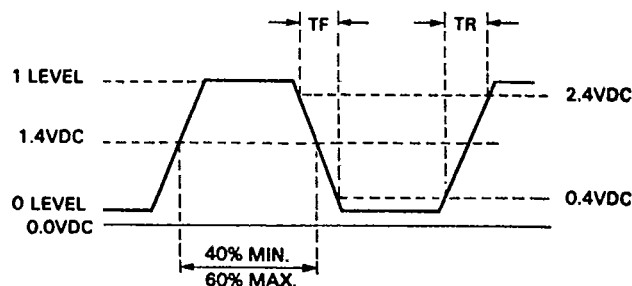
VCXO Pin Configuration

See Figure 1, Page 2 for Package

Voltage Controlled Oscillator



VCXO Load Circuit



VCXO Wave Shape