

# WU Series SMD Radiation Hardened Oscillators Rev13.10

## ELECTRICAL SPECIFICATIONS

| PARAMETER                                              | Min.                | Typ.   | Max.                | Units         |
|--------------------------------------------------------|---------------------|--------|---------------------|---------------|
| Frequency Temperature Stability<br>Refer to +25°C      |                     |        | ± 100               | ppm           |
| Storage Temperature                                    | -55                 |        | +125                | °C            |
| <b>1.8-- 3.3 Volt Supply Models</b>                    |                     |        |                     |               |
| Frequency Range                                        | 0.2                 |        | 125                 | MHz           |
| Input Voltage, V <sub>DD</sub>                         | 3.15                | 3.3    | 3.45                | volts         |
| Input Current                                          |                     |        | 40                  | mA            |
| Output Levels<br>"0"Level<br>"1"Level                  | 90% V <sub>DD</sub> |        | 10% V <sub>DD</sub> | volts         |
| Rise and Fall Time<br>Below 40 MHz<br>40 MHz and above |                     |        | 10<br>6             | ns<br>ns      |
| Start-up time                                          |                     |        | 15                  | ms            |
| Jitter                                                 |                     |        | 6                   | ps RMS        |
| Waveform Symmetry<br>Measured at 50% V <sub>pp</sub>   | 40/60               |        | 60/40               | percent       |
| <b>5.0 Volt Supply Models</b>                          |                     |        |                     |               |
| Frequency Range                                        | 0.2                 |        | 125                 | MHz           |
| Input Voltage, V <sub>DD</sub>                         | 4.5                 | 5.0    | 5.5                 | volts         |
| Input Current<br>Frequency at 0.2 to 125MHz            |                     |        | 90                  | mA            |
| Waveform Symmetry<br>Measured at 50% V <sub>pp</sub>   | 40/60               |        | 60/40               | percent       |
| Rise and Fall Time<br>Below 40 MHz<br>40 MHz and above |                     |        | 10<br>6             | ns<br>ns      |
| "Zero"Level,<br>Load 15pF // 10k Ω                     |                     |        | 10% V <sub>DD</sub> | volts         |
| "One"Level,                                            | 90% V <sub>DD</sub> |        |                     | volts         |
| <b>All Models</b>                                      |                     |        |                     |               |
| Aging<br>First year<br>After first year                |                     | 5<br>5 | 10<br>10            | ppm<br>ppm/yr |

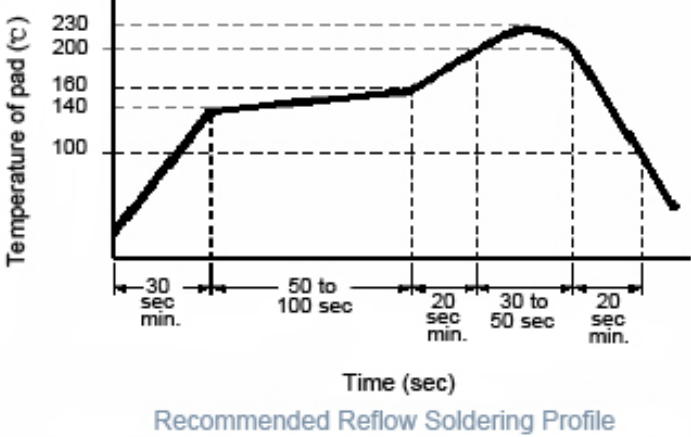
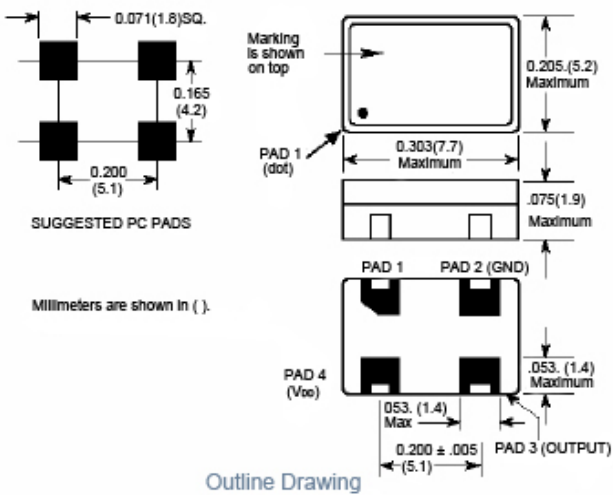
|                                 |                                                                            |                                              |
|---------------------------------|----------------------------------------------------------------------------|----------------------------------------------|
| Environmental<br>And Mechanical | Operating Temperature Range                                                | -55°C to +125°C                              |
|                                 | Shock                                                                      | MIL-STD-883, Method 2002, Test Condition B   |
|                                 | Vibration                                                                  | MIL-STD-883, Method 2007, Test Condition B   |
|                                 | Humidity                                                                   | MIL-STD-883, Method 1014, Test Condition A1  |
| Pin Connections                 | Pin 1: N/C<br>Pin 2: Ground/Case<br>Pin 3: Output<br>Pin 4: Supply Voltage | Pin 1= tristate for special frequency output |

Internal Quartz Crystal Character for Oscillators

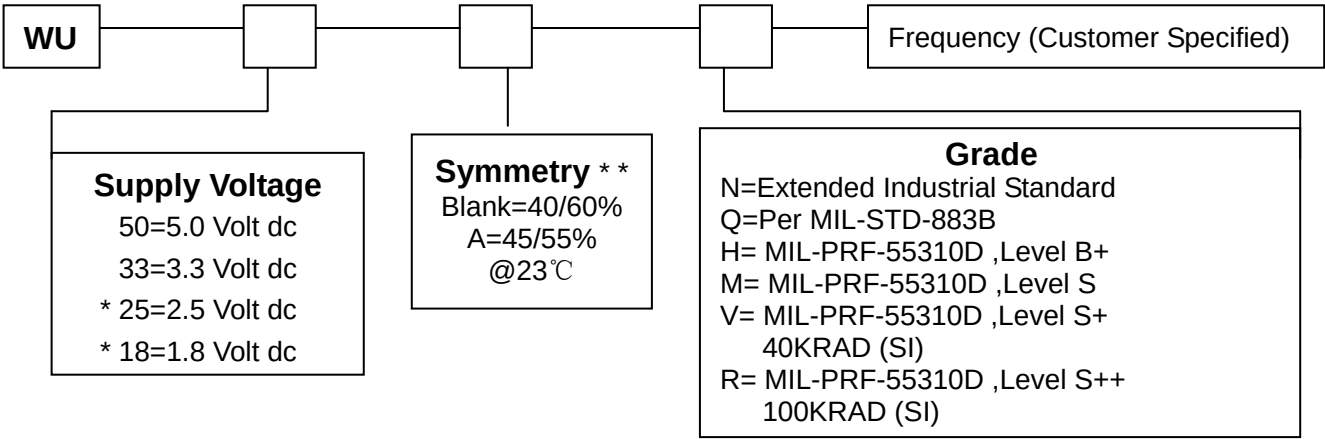
| Parameter       | Unit | Condition                                   | Min | Type | Max | Notes |
|-----------------|------|---------------------------------------------|-----|------|-----|-------|
| Frequency Range | MHz  | AT Fundamental                              | 0.2 |      | 50  |       |
|                 | MHz  | 3 <sup>rd</sup> or 5 <sup>th</sup> overtone | 50  |      | 160 |       |

Description

These high reliability oscillators provide HCMOS clock waveforms for applications subjected to the most stringent environmental and Radiation Hardened conditions. They are mechanically robust and weigh less than 0.2 grams. This 5×7mm SMD package has a hermetic seal, thus ensuring the integrity of each oscillator. Each oscillator is fully screened in accordance with MIL-PRF-565310D , Level S.



Part Numbering Guide



Notes:  
\* Contact with our authorized distributor for details  
\* \* Symmetry tested at 23°C±1°C