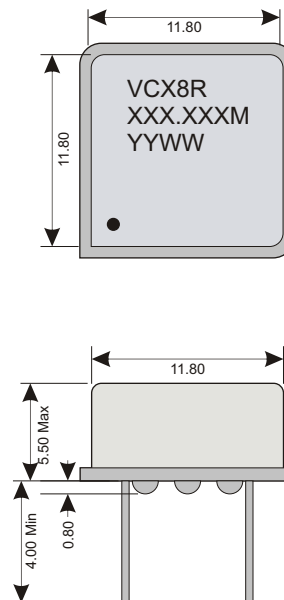




### Specifications

|                                    |                         |                |
|------------------------------------|-------------------------|----------------|
| <b>Package</b>                     | VCX8R                   |                |
| <b>Frequency Range (fo)</b>        | 1.000MHz ~ 155.520MHz   |                |
| <b>Logic Family</b>                | HCMOS                   |                |
| <b>Freq. Stability (Df/fo)</b>     | ±50ppm                  |                |
| <b>Pullability</b>                 | ±100ppm                 |                |
| <b>Aging/Year (fa)</b>             | 5ppm                    |                |
| <b>Temp. Range</b>                 | <b>Operating (TOPR)</b> | 0°C ~ +70°C    |
|                                    | <b>Storage (TSTG)</b>   | -55°C ~ +125°C |
| <b>Phase Jitter RMS (12-20MHz)</b> | 1pS Max                 |                |
| <b>Linearity</b>                   | ±10%                    |                |
| <b>Frequency Control</b>           | 2.5V ±2.0V              |                |

### Dimensions (mm)



EU RoHS  
EU RoHS  
Leaf  
Compliant



Reach  
Compliant



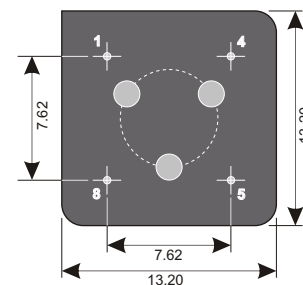
China  
RoHS  
Compliant



Conflict  
Minerals  
Free

### Electrical - HCMOS

|                         |                           |                      |            |          |
|-------------------------|---------------------------|----------------------|------------|----------|
| <b>Power Supply</b>     | <b>Voltage (VDD)</b>      | 5.0Vdc ±5%           | 3.3Vdc ±5% |          |
|                         | <b>INPUT Current</b>      | 0.5 ~ 20.0MHz        | 20mA Max   | 10mA Max |
|                         |                           | 20.1 ~ 60.0MHz       | 40mA Max   | 20mA Max |
|                         |                           | 60.0MHz ~ 155.520MHz | 50mA Max   | 30mA Max |
| <b>Stand-by current</b> | 10uA Max                  |                      |            |          |
| <b>Output</b>           | <b>Load</b>               | 15pF                 |            |          |
|                         | <b>Voltage (VOL Max.)</b> | 0.5Vdc Max           | 0.4Vdc Max |          |
|                         | <b>Voltage (VOH Min.)</b> | 4.5Vdc Min           | 1.7Vdc Min |          |
| <b>Start-up Time</b>    | 10mS Max                  |                      |            |          |
| <b>Symmetry/Duty</b>    | 45/55 @ 50% Level         |                      |            |          |



### Absolute Maximum Ratings

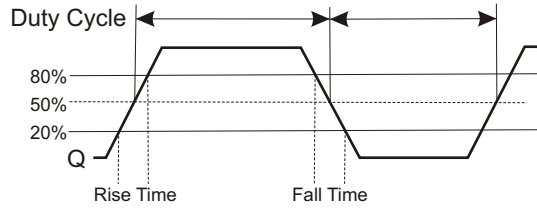
|                             |                     |         |
|-----------------------------|---------------------|---------|
| <b>Maximum Storage Temp</b> | -55°C to +125°C     |         |
| <b>Voltage (VDD)</b>        | 7.0 VDC             | 5.0 VDC |
| <b>Input Voltage</b>        | 0.5Vdc ~ Vdd+0.5Vdc |         |

### Connections

|              |                  |
|--------------|------------------|
| <b>Pin 1</b> | +Voltage Control |
| <b>Pin 4</b> | Ground           |
| <b>Pin 5</b> | Output           |
| <b>Pin 8</b> | Vdd              |



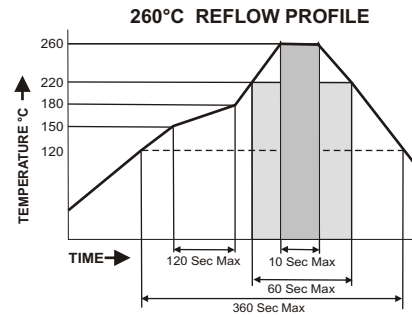
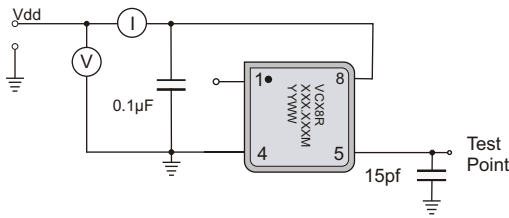
**HCMOS Waveform**



**Environmental And Mechanical**

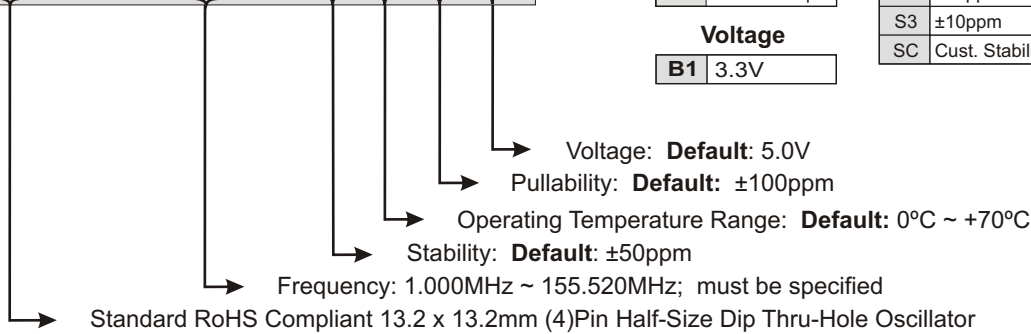
|                    |   |
|--------------------|---|
| <b>Temperature</b> | 10 Cycles of -30°C (30Mins), Normal (1Hr), 85°C (30Mins), Normal (1Hr)  |
| <b>Shock</b>       | Accelerated at 1000G for 1mS in each perpendicular axis.  |
| <b>Vibration</b>   | 4 Cycles of 20G acceleration at 20 - 2,000Hz within 4 Minutes in each perpendicular axis.                               |
| <b>Solder</b>      | Peak Temperature of 260°C Max for 10 Seconds with preheat of 160°C for 90±10% for 10 Seconds for a Maximum of 2 Cycles. |

**HCMOS Test Circuit**



**Part Number**

**VCX8R - XXX.XXX M-SX RX HX BX**



| OP Temp |               |
|---------|---------------|
| R6      | -40°C ~ +85°C |
| RC      | Custom Temp.  |
| Voltage |               |
| B1      | 3.3V          |

| Stability |                 |
|-----------|-----------------|
| S1        | ±50ppm          |
| S2        | ±25ppm          |
| S3        | ±10ppm          |
| SC        | Cust. Stability |

| Pullability |              |
|-------------|--------------|
| H2          | ±75ppm Pull  |
| H3          | ±100ppm Pull |
| H4          | ±125ppm Pull |
| H5          | ±150ppm Pull |
| H6          | ±200ppm Pull |
| H7          | ±250ppm Pull |
| HC          | Cust. Pull   |

Example: **VCX8R-125.000M** 125.000MHz, 5.0V ±50ppm Oscillator operating at 0°C ~70°C  
 Example: **VCX8R-125.000M-S2R6B1** 125.000MHz, 3.3V ±25ppm Oscillator operating at -40°C ~ +85°C,