

### Typical Applications

*Phase Locking  
Test Equipment  
Digital Switching*

### Features

*Small Package  
Fundamental Crystal  
Wide Frequency Range*



### Frequency Range

**30 MHz – 155.52 MHz**

### Standard Frequency

**155.520000 MHz**

### Frequency Stabilities

|              |                    |                           |
|--------------|--------------------|---------------------------|
| Aging / year | ± 3.0 ppm year one | ± 1 to ± 2 ppm thereafter |
|--------------|--------------------|---------------------------|

### Frequency tuning

|                  | 955              | 955S             | 955E            |
|------------------|------------------|------------------|-----------------|
| Voltage Control: |                  |                  |                 |
| Voltage Range    | 0.5Vdc to 4.5Vdc | 0.5Vdc to 4.5Vdc | 0Vdc to -5Vdc   |
| Linearity        | 20% max.         | 20% max.         | 20% max.        |
| Slope            | Positive         | Positive         | Positive        |
| Tuning Range     | ±150 ppm. Min.   | ±150 ppm. Min.   | ±50 to 100 ppm. |

### RF output

|                                        | 955           | 955S                       | 955E              |
|----------------------------------------|---------------|----------------------------|-------------------|
| Signal                                 | HCMOS/ACMOS   | Sine<br>(0dBm into 50 ohm) | ECL               |
| Rise and Fall Time @ 10% to 90% levels | 5 nsec.       | N/A                        | 1 nsec.           |
| Symmetry                               | 40/60%        | N/A                        | 45/55%            |
| Logic "0"                              | +0.5 Vdc Max. | N/A                        | -1.6 to -2.0 Vdc. |
| Logic "1"                              | +4.0 Vdc Min. | N/A                        | -0.6 to -1.0 Vdc. |

### Supply Voltage

|                             | 955       | 955S     | 955E     |
|-----------------------------|-----------|----------|----------|
| Supply voltage options (Vs) | +5.0 Vdc  | +5.0 Vdc | -5.2 Vdc |
| Supply Current              | 70 mA max |          |          |

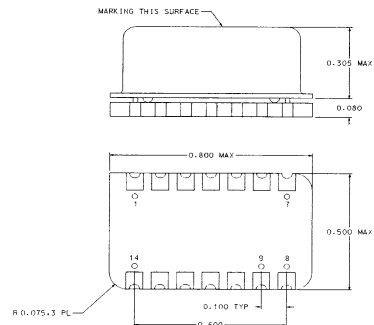
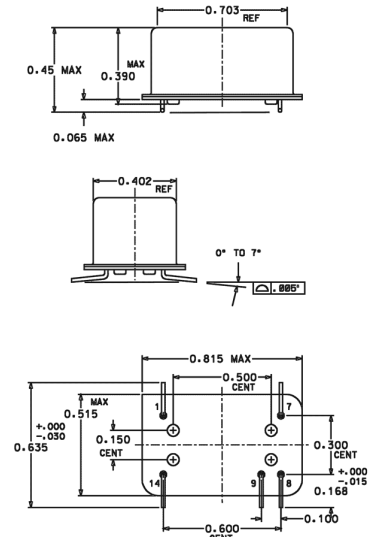
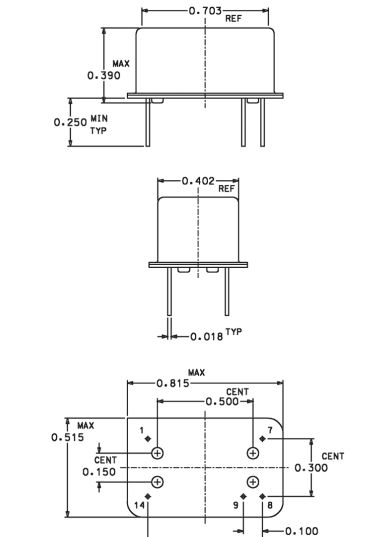
### Temperature Stability

|     |                      |                        |
|-----|----------------------|------------------------|
| PPM | ±20.0 @ 0°C to +70°C | ±30.0 @ -40°C to +85°C |
|-----|----------------------|------------------------|

### Additional Parameters

|                           |                                                   |                                |        |
|---------------------------|---------------------------------------------------|--------------------------------|--------|
| Phase Noise               | < - 70dBc<br>< - 105dBc<br>< -130dBc<br>< -150dBc | 10Hz<br>100Hz<br>1kHz<br>10kHz | Note 1 |
| Storage Temperature Range | -55 to 125°C                                      |                                |        |
| Processing                | Tech_Note_1                                       |                                |        |
| Packaging                 | Tech_Note_2                                       |                                |        |

## Enclosures

| SMT "S" Package                                                                   | Gullwing "G" Package                                                               | Through-hole "T" Package                                                            |                                                       |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------|
|  |  |  |                                                       |
| Pin Connections                                                                   | 955                                                                                | 955S                                                                                | 955E                                                  |
| Pin 1<br>Pin 7<br>Pin 8<br>Pin 14                                                 | Voltage Control<br>GND<br>RF Output<br>Supply Voltage                              | Voltage Control<br>GND<br>RF Output<br>Supply Voltage                               | Voltage Control<br>Supply Voltage<br>RF Output<br>GND |

## Notes

- Typical values @ 70.00 MHz  
Unless otherwise stated all values are valid after warm-up time and refer to typical conditions for supply voltage, frequency control voltage, load, temperature (25°C)
- No frequency multiplier used within this VCXO