



## HCMOS SQUAREWAVE OUTPUT OCXO IN 1"x1" DIP PACKAGE - OC25C Series

### FEATURES

- Wide Frequency Range (1 MHz to 100 MHz), 15 pF HCMOS Square Wave Output
- AT-cut or SC-cut Crystal, Stratum3 or Better Stability, 5V or 12V Supply Voltage
- Voltage Control Option, Industry Standard Lead Spacing
- Standard Frequencies: 10, 12, 12.8, 13, 14.4, 16.384, 32.768, 100.00 MHz

### SPECIFICATIONS

|                                      |  |
|--------------------------------------|--|
| <b>Frequency Stability vs. Temp</b>  | 50 = $\pm 50$ ppb; 100 = $\pm 100$ ppb; 500 = $\pm 500$ ppb  |
| <b>Temperature Range</b>             | A = 0°C to 70°C; B = -40°C to 85°C; D = -20°C to 70°C  |
| <b>Aging (after 30 days)</b>         | 1E-7 first year, at 10MHz AT-cut   |
| <b>Initial Tolerance</b>             | $\pm 0.05$ ppm Typ, at 25°C, $V_c = 1/2 V_{cc}$  |
| <b>Frequency vs. Load</b>            | $\pm 0.02$ ppm Typ / $\pm 5\%$ load change   |
| <b>Frequency vs. Voltage</b>         | $\pm 0.02$ ppm/V Typ   |
| <b>Storage Temperature Range</b>     | -40°C to 105°C   |
| <b>Phase Noise(Typ,10MHz,AT-cut)</b> | -115 dBc/Hz @10Hz, -135 dBc/Hz @100Hz<br>-150 dBc/Hz @1KHz, -155 dBc/Hz @10KHz                                     |
| <b>G-Sensitivity</b>                 | $\pm 0.002$ ppm/G, Worst direction   |
| <b>Input Voltage (Vcc)</b>           | A = +5 VDC $\pm 5\%$ ; T = +12 VDC $\pm 5\%$ ; U = +15 VDC $\pm 5\%$   |
| <b>Input Current (Max)</b>           | Steady state: 200 mA / 120 mA for $V_{cc} = 5V / 12V$ at 25°C<br>Start-up: 500 mA / 250 mA for $V_{cc} = 5V / 12V$ |
| <b>Output Load</b>                   | 15 pF  |
| <b>Warm-up Time</b>                  | 3 minutes Maximum, to $\pm 0.1$ ppm accuracy   |
| <b>Output Waveform</b>               | HCMOS compatible square wave; 40/60% Duty cycle  |
| <b>Logic "1" / Logic "0" Level</b>   | 4.5V / 0.5V Typ  |
| <b>Rise/Fall Time (Tr/Tf)</b>        | 5 ns Maximum   |
| <b>EFC Range</b>                     | $\pm 5$ ppm/AT-cut, $\pm 0.7$ ppm/SC-cut, with control voltage $V_c = 0.5V$ to 4.5V                                |
| <b>Linearity / Slope</b>             | $\pm 10\%$ Maximum of best straight line fit / Positive  |
| <b>EFC Input Impedance</b>           | 100 kOhms Minimum  |

### Creating a Part Number

**OC25C-12M800-A 50 D V** (Not all combinations are available. Consult factory)

|                          |       |  |                           |
|--------------------------|-------|--|---------------------------|
| Product Series           | OC25C | EFC option or blank                        |                           |
| Frequency                | 12M   | Operating Temperature Range: A = 0 to 70°C |                           |
| Supply Voltage: A = 5.0V |       | Frequency Stability:                       | B = -40 to 85°C           |
| T = 12V                  |       | 50 = $\pm 50$ ppb                          | D = -20 to 70°C           |
| U = 15V                  |       | 100 = $\pm 100$ ppb                        | X = Customized Temp Range |
|                          |       | 500 = $\pm 500$ ppb                        |                           |

### OUTLINE DRAWING

