## $3.2 \times 2.5 \mathrm{~mm}$, Wide Temp Automotive

## FEATURES

- Femto second integrated phase jitter 150 fs typical ( $12 \mathbf{k H z}$ to $\mathbf{2 0 M H z}$ )
- Superior phase noise performance: $-155 \mathrm{dBc} / \mathrm{Hz}$ at 10 kHz and $\mathbf{- 1 6 0 \mathrm { dBc }}$ at 100 kHz offset
- Wide operating temperature available to $-\mathbf{4 0 ^ { \circ }}$ to $+125^{\circ} \mathrm{C}$
- Automotive grade

SPECIFICATION

| Model Number | XOY Series |  |  |
| :---: | :---: | :---: | :---: |
| Frequency Range | 1.250 MHz to 50.000 MHz |  |  |
| Output Logic | LVCMOS |  |  |
| Supply Voltage Vdd | 1.8 VdD $\pm 10 \%$ | +2.5 VdD $\pm 10 \%$ | +3.3 VDD $\pm 10 \%$ |
| Logic High "1" (90\% of Vod minimum) Logic Low "0" (10\% of Vdo maximum) | 1.62 V | 2.25 V | 2.97 V |
|  | 0.18 V | 0.25V | 0.33 V |
| Current Consumption | 2.0 mA (max) | 3.0 mA (max) | 4.0 mA (max) |
|  | 4.0 mA (max) | 5.0mA (max) | 6.0mA (max) |
| Rise Time (Tr) / Fall Time (Tf) | 10ns (max) measured 10\% ~ 90\% waveform |  |  |
| Load | 15pF |  |  |
| Start-up Time | 5ms (max) |  |  |
| Duty Cycle | Standard: 50\% $\pm 10 \%$; Option $50 \% \pm 5 \%$ (Add "S" after the part number for this option) |  |  |
| Tristate Function | Tristate function on Pad 1 is standard for XOY series oscillators 70\% of VDD(min) Enable Output 30\% of VDD(max) Disable Output |  |  |
| Phase Jitter (RMS) [26MHz, 3.3V] | 150 fs typical ( 12 kHz to 20 MHz integrated) |  |  |


| SSB Phase Noise [25MHz, 3.3V] | Offset | 10 Hz | 100 Hz | 1 kHz | 10kHz | 100 kHz | 1 MHz | 5 MHz |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | dBc/Hz (typical) | -94 | -127 | -142 | -156 | -161 | -163 | -163 |
| Storage Temperature |  | $-65^{\circ}$ to $+150^{\circ} \mathrm{C}$ |  |  |  |  |  |  |
| Ageing at $\mathbf{2 5}^{\circ} \mathrm{C}$ |  | $\pm 2 \mathrm{ppm}$ maximum for first year |  |  |  |  |  |  |
| Solder Profile |  | $260^{\circ} \mathrm{C}$ max. |  |  |  |  |  |  |

## ORDERING/PART NUMBER GENERATION



OUTLINE \& DIMENSIONS


