

14 PIN DIP ECL OSCILLATOR F5L

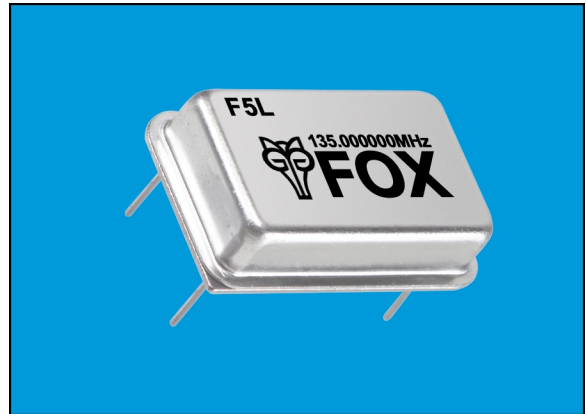
Fox F5L ECL Clock Oscillators feature a high frequency range. The standard 14 pin dip all metal package provides shielding to minimize RF radiation, helping to meet FCC EMI specifications.

FEATURES

- High Frequency Range
- 10 KH Logic Output
- Low Noise

OPTIONS

- Complementary Output
- Pullup/Down Internal Resistors
- Various Pin Connections
- ± 50 PPM (F6L Series), ± 25 PPM (F7L Series)
- $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$ "R" version available in 50 & 100 PPM (ex: F5L-4FR)



OSCILLATORS

• ELECTRICAL CHARACTERISTICS ($V_{EE} = -5.2\text{V} \pm 5\%^{**}$, $V_{TT} = -2.0\text{V}^{**}$ $R_T = 50\Omega^{**}$)

| PARAMETERS | FREQUENCY RANGE | CONDITIONS | MIN | MAX | UNITS |
|-----------------------------|--------------------|---|--------|---------|--------------------|
| Frequency Range (Fo) | | | 30.000 | 200.000 | MHz |
| Frequency Stability | 30.000 ~ 200.000 | All Conditions * | -100 | +100 | PPM |
| Temperature Range | | | | | |
| Operating (TOPR) | | | -10 | +70 | $^{\circ}\text{C}$ |
| Storage (TSTG) | | | -55 | +125 | |
| Supply Voltage (V_{EE}) | | | -5.46 | -4.94 | V** |
| Input Current (I_{DD}) | 30.000 ~ 170.000 | | | 40 | mA |
| | | (F5L-G, H, 4G, 4H)** | | 50 | |
| | 170.000+ ~ 200.000 | | | 50 | |
| | | (F5L-G, H, 4G, 4H)** | | 60 | |
| Output Symmetry | 30.000 ~ 200.000 | 50% V_{p-p} Level | 40 | 60 | % |
| Rise Time (T_R) | 30.000 ~ 170.000 | 20% $V_{p-p} \sim 80\%$ V_{p-p} Level | | 2.0 | nS |
| | 170.000+ ~ 200.000 | | | 1.5 | |
| Fall Time (T_F) | 30.000 ~ 170.000 | 80% $V_{p-p} \sim 20\%$ V_{p-p} Level | | 2.0 | |
| | 170.000+ ~ 200.000 | | | 1.5 | |
| Output Voltage (V_{OL}) | 30.000 ~ 200.000 | '0' Logic Level (F5L-G, H, 4G, 4H)** | -1.95 | -1.60 | V |
| | | '1' Logic Level (F5L-G, H, 4G, 4H)** | +3.05 | +3.42 | |
| | 30.000 ~ 200.000 | | -1.00 | -0.75 | |
| | | | +4.00 | +4.45 | |
| Output Load | 30.000 ~ 200.000 | ECL Load | | 5 | Gates |
| Overlap Time | 30.000 ~ 200.000 | 50% V_{p-p} (Complementary only) | | 0.5 | nS |
| Start-up Time (T_s) | 30.000 ~ 200.000 | | | 10 | mS |

• MODEL NUMBER SELECTION / PIN CONNECTIONS

| Single Output | | | | | PullUp/Down Resistor | Complementary Output | | | | | PullUp/Down Resistor |
|---------------|-------|-------|--------|--------|----------------------|----------------------|----------|-------|----------|--------|----------------------|
| Model# | Pin 1 | Pin 7 | Pin 8 | Pin 14 | | Model# | Pin 1 | Pin 7 | Pin 8 | Pin 14 | |
| F5L-B | NC | GND | OUTPUT | -5.2V | Down [a] | F5L-4B | OUTPUT 1 | GND | OUTPUT 2 | -5.2V | Down [a] |
| E | NC | GND | OUTPUT | -5.2V | None | 4E | OUTPUT 1 | GND | OUTPUT 2 | -5.2V | None |
| C | NC | -5.2V | OUTPUT | GND | Down [a] | 4C | OUTPUT 1 | -5.2V | OUTPUT 2 | GND | Down [a] |
| F | NC | -5.2V | OUTPUT | GND | None | 4F | OUTPUT 1 | -5.2V | OUTPUT 2 | GND | None |
| H | NC | GND | OUTPUT | +5.0V | Up [a] | 4H | OUTPUT 1 | GND | OUTPUT 2 | +5.0V | Up [a] |
| G | NC | GND | OUTPUT | +5.0V | None | 4G | OUTPUT 1 | GND | OUTPUT 2 | +5.0V | None |

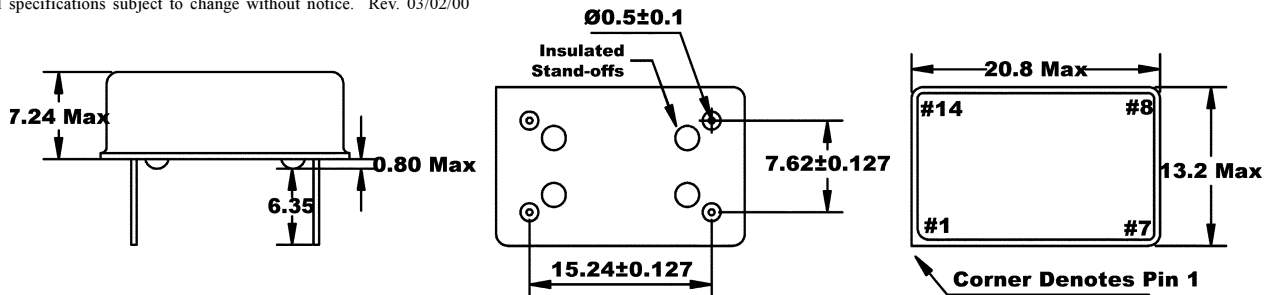
* Inclusive of 25 $^{\circ}\text{C}$ tolerance, operating temperature range, input voltage change, load change, aging, shock, and vibration.

[a] up to 170MHz

** F5L-G, F5L-H $V_{cc} = 5.0\text{V} \pm 0.25\text{V}$. Consult factory for test circuitry.

See page 44 for mechanical specifications, test circuits, and output waveform.

All specifications subject to change without notice. Rev. 03/02/00



All dimensions are in millimeters.