

# HCMOS 5x3.2mm 3.3V SMD Oscillator



Model: F530L SERIES

RoHS Compliant / Pb Free

Rev. 5/7/2009

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Need a  
Sample®

## FEATURES

- 3.3V Operation
- Standby Function
- Tape and Reel (1,000 pcs. STD)

## OPTIONS

- 5.0V (F550L) Version Available

XpressO® Equivalent  
**FXO-HC53**

Why XpressO?  
Lower Cost, Faster Delivery, Low Jitter!

## • PART NUMBER SELECTION [Learn More - Internet Required](#)

| Part Number         | Model Number | Frequency Stability <sup>1</sup> | Operating Temperature (°C) | Frequency Range (MHz) |
|---------------------|--------------|----------------------------------|----------------------------|-----------------------|
| 474-Frequency-xxxxx | F530L        | ±100PPM                          | -10 ~ +70                  | 1.544 ~ 155.520       |
| 475-Frequency-xxxxx | F530LR       | ±100PPM                          | -40 ~ +85                  | 1.544 ~ 155.520       |
| 476-Frequency-xxxxx | F535L        | ±50PPM                           | -10 ~ +70                  | 1.544 ~ 155.520       |
| 550-Frequency-xxxxx | F535LR       | ±50PPM                           | -40 ~ +85                  | 1.544 ~ 155.520       |
| 492-Frequency-xxxxx | F536L        | ±25PPM                           | -10 ~ +70                  | 1.544 ~ 155.520       |
| 636-Frequency-xxxxx | F536LR       | ±25PPM*                          | -40 ~ +85                  | 1.544 ~ 155.520       |
| 546-Frequency-xxxxx | F538L        | ±20PPM*                          | -10 ~ +70                  | 1.544 ~ 77.760        |

## • ELECTRICAL CHARACTERISTICS

| PARAMETERS                                               | MAX (unless otherwise noted) |
|----------------------------------------------------------|------------------------------|
| Frequency Range (Fo)                                     | 1.544 ~ 155.520 MHz          |
| Storage Temperature Range (T <sub>STG</sub> )            | -55°C ~ +125°C               |
| Supply Voltage (V <sub>DD</sub> )                        | 3.3V ± 10%                   |
| Input Current (I <sub>DD</sub> )                         |                              |
| 1.544 ~ 32.000 MHz                                       | 15mA                         |
| 32.000+ ~ 50.000 MHz                                     | 20mA                         |
| 50.000+ ~ 67.000 MHz                                     | 25mA                         |
| 67.000+ ~ 155.520 MHz                                    | 40mA                         |
| Output Symmetry (50% V <sub>DD</sub> )                   | 40% ~ 60%                    |
| Rise Time (10% ~ 90% V <sub>DD</sub> ) (T <sub>R</sub> ) | 7nS                          |
| Fall Time (90% ~ 10% V <sub>DD</sub> ) (T <sub>F</sub> ) | 7nS                          |
| Output Voltage (V <sub>OL</sub> )                        | 10% V <sub>DD</sub>          |
| (V <sub>OH</sub> )                                       | 90% V <sub>DD</sub> Min      |
| Output Current (I <sub>OL</sub> )                        | 2mA Min                      |
| (I <sub>OH</sub> )                                       | -2mA Min                     |
| Output Load (HCMOS)                                      | 15pF                         |
| Standby Current                                          | 10μA                         |
| Start-up Time (T <sub>s</sub> )                          | 10mS                         |
| Output Disable Time <sup>2</sup>                         | 150nS                        |
| Output Enable Time <sup>2</sup>                          | 10mS                         |
| Reflow Soldering Temp                                    | 260°C / 10 Seconds           |
| Moisture Sensitivity Level (MSL)                         | 1                            |
| Termination Finish                                       | Au                           |

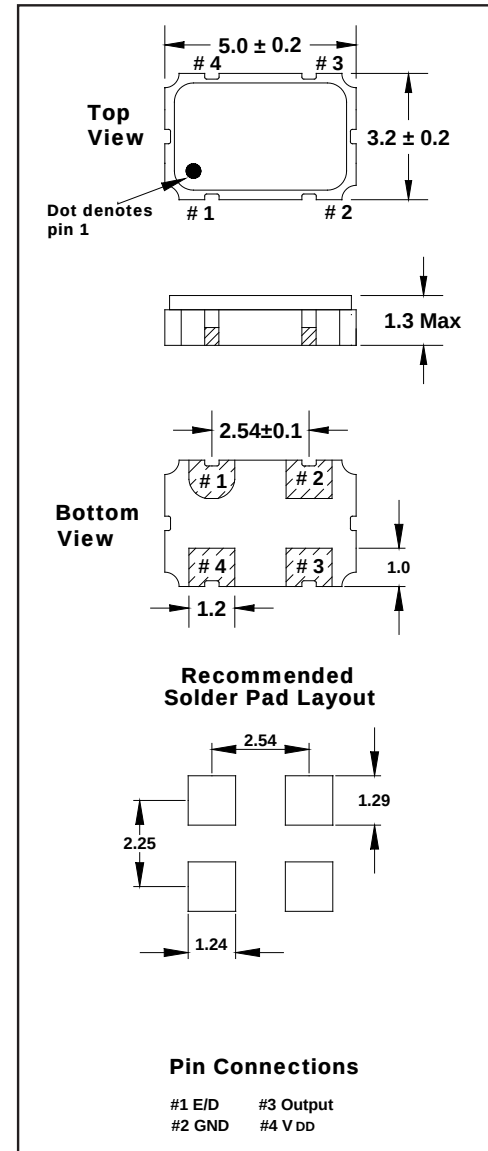
<sup>1</sup> Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, aging, shock, and vibration. \*Excludes Shock/Vibration

<sup>2</sup> An internal pullup resistor from pin 1 to pin 4 allows active output if pin 1 is left open.

Note: A 0.01μF bypass capacitor should be placed between V<sub>DD</sub> (Pin 4) and GND (Pin 2) to minimize power supply line noise.

Drawing is for reference to critical specifications defined by size measurements.

Certain non-critical visual attributes, such as side castellations, reference pin shape, etc. may vary. All specifications subject to change without notice.



## • ENABLE / DISABLE FUNCTION

| INH (Pin 1)                                     | OUTPUT (Pin 3) |
|-------------------------------------------------|----------------|
| OPEN <sup>2</sup>                               | ACTIVE         |
| '1' Level V <sub>IH</sub> ≥ 70% V <sub>DD</sub> | ACTIVE         |
| '0' Level V <sub>IL</sub> ≤ 30% V <sub>DD</sub> | High Z         |

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## • TAPE SPECIFICATIONS (millimeters)

| MODEL        | A    | B   | C   | D   | E    | F   | STD Reel QTY |
|--------------|------|-----|-----|-----|------|-----|--------------|
| F530L Series | Ø1.5 | 4.0 | 8.0 | 5.5 | 12.0 | 1.5 | 1,000        |

## • REEL SPECIFICATIONS (millimeters)

| MODEL        | G   | H   | I   | J   | K    | L    | M   |
|--------------|-----|-----|-----|-----|------|------|-----|
| F530L Series | 2.0 | Ø13 | Ø21 | Ø62 | Ø180 | 13.5 | 2.0 |

