



# 2.5V HCMOS SMD OSCILLATOR WITH STANDBY MODEL: F4400 SERIES



## FEATURES

- 2.5V Operation
- HCMOS Output
- Low Power Consumption
- Standby Function
- Tape and Reel (2,000 pcs. STD)



| • PART NUMBER SELECTION <a href="#">Learn More</a> - Internet Required |              |                                  |                            |                       |
|--|--------------|----------------------------------|----------------------------|-----------------------|
| Part Number  | Model Number | Frequency Stability <sup>1</sup> | Operating Temperature (°C) | Frequency Range (MHz) |
| 521-Frequency-xxxxx  | F4400        | ±100PPM                          | -10 ~ +70                  | 1.800 ~ 125.000       |
| 522-Frequency-xxxxx  | F4400R       | ±100PPM                          | -40 ~ +85                  | 1.800 ~ 125.000       |
| 523-Frequency-xxxxx  | F4405        | ±50PPM                           | -10 ~ +70                  | 1.800 ~ 125.000       |
| 524-Frequency-xxxxx  | F4405R       | ±50PPM                           | -40 ~ +85                  | 1.800 ~ 125.000       |
| 525-Frequency-xxxxx  | F4406        | ±25PPM                           | -10 ~ +70                  | 1.800 ~ 65.000        |
| 526-Frequency-xxxxx  | F4406R       | ±25PPM*                          | -40 ~ +85                  | 1.800 ~ 50.000        |
| 527-Frequency-xxxxx  | F4408        | ±20PPM*                          | -10 ~ +70                  | 1.800 ~ 50.000        |

Learn more about:  
[Part Marking Identification](#)  
[Tape and Reel Specification](#)  
[Mechanical Specification](#)  
Internet required

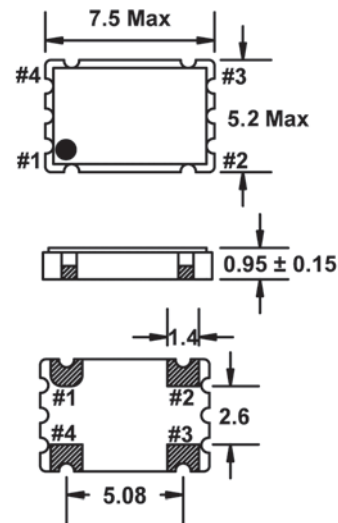
| • ELECTRICAL CHARACTERISTICS     |                              |
|----------------------------------|------------------------------|
| PARAMETERS                       | MAX (unless otherwise noted) |
| Frequency Range (Fo)             | 1.800 ~ 125.000 MHz          |
| Storage Temperature Range (TSTG) | -55°C ~ +125°C               |
| Supply Voltage (VDD)             | 2.5V ± 5%                    |
| Input Current (IDD)              |                              |
| 1.800 ~ 32.100 MHz               | 10mA                         |
| 32.100+ ~ 50.000 MHz             | 12mA                         |
| 50.000+ ~ 125.000 MHz            | 60mA                         |
| Output Symmetry (50% VDD)        | 45% ~ 55%                    |
| Rise Time (10% ~ 90% VDD) (TR)   | 5nS                          |
| Fall Time (90% ~ 10% VDD) (TF)   | 5nS                          |
| Output Voltage (VOL)             | 10% VDD                      |
| (VOH)                            | 90% VDD Min                  |
| Output Current (IOL)             | 4mA Min                      |
| (IOH)                            | 4mA Min                      |
| Output Load (HCMOS)              | 15pF                         |
| Standby Current                  | 10µA                         |
| Start-up Time (Ts)               | 10mS                         |
| Output Disable Time <sup>2</sup> | 150nS                        |
| Output Enable Time <sup>2</sup>  | 10mS                         |

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

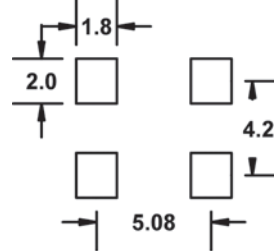
<sup>2</sup> An internal pullup resistor from pin 1 to pin 4 allows active output if pin 1 is left open.

Note: A 0.01µF bypass capacitor should be placed between VDD (Pin 4) and GND (Pin 2) to minimize power supply line noise.

All specifications subject to change without notice. Rev. 6/1/04



### Recommended Solder Pad Layout



### Pin Connections

#1 E/D #3 Output  
#2 GND #4 V<sub>DD</sub>

*All dimensions are in millimeters.*

| • 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         |