



# 5.0V HCMOS SMD OSCILLATOR WITH STANDBY

## MODEL: F4101 Series



### FEATURES

- 5.0V Operation
- HCMOS Output
- Standby Function
- Tape and Reel (2,000 pcs. STD)



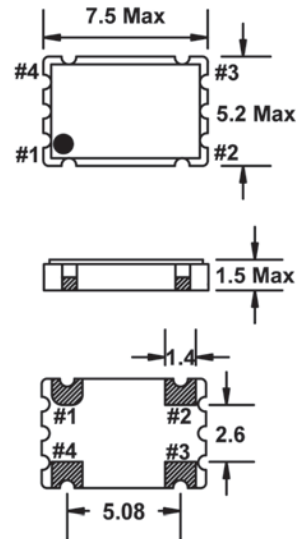
PART NUMBER SELECTION <a href="#">Learn More</a> - Internet Required				
Part Number	Model Number	Frequency Stability <sup>1</sup>	Operating Temperature	Frequency Range (MHz)
118-Frequency-xxxxx	F4101	±100PPM	-10 ~ +70°C	1.544 ~ 170.000
119-Frequency-xxxxx	F4101R	±100PPM	-40 ~ +85°C	1.544 ~ 170.000
120-Frequency-xxxxx	F4102	±50PPM	-10 ~ +70°C	1.544 ~ 170.000
121-Frequency-xxxxx	F4102R	±50PPM	-40 ~ +85°C	1.544 ~ 170.000
122-Frequency-xxxxx	F4103	±25PPM	-10 ~ +70°C	1.544 ~ 162.000
123-Frequency-xxxxx	F4103R*	±25PPM	-40 ~ +85°C	1.544 ~ 156.250
446-Frequency-xxxxx	F4104*	±20PPM	-10 ~ +70°C	1.544 ~ 162.000

ELECTRICAL CHARACTERISTICS	
PARAMETERS	MAX (unless otherwise noted)
Frequency Range (Fo)	1.544 ~ 170.000 MHz
Storage Temperature Range (T <sub>STG</sub> )	-55°C ~ +125°C
Supply Voltage (V <sub>DD</sub> )	5.0V ± 10%
Input Current (I <sub>DD</sub> )	
1.544 ~ 32.000 MHz	18mA
32.000+ ~ 67.000 MHz	50mA
67.000+ ~ 125.000 MHz	80mA
125.000+ ~ 170.000 MHz	90mA
Output Symmetry (50% V <sub>DD</sub> )	40% ~ 60%
Rise Time (10% ~ 90% V <sub>DD</sub> ) (T <sub>R</sub> )	
1.544 ~ 79.999999 MHz	5nS
80.000 ~ 170.000 MHz	4nS
Fall Time (90% ~ 10% V <sub>DD</sub> ) (T <sub>F</sub> )	
1.544 ~ 79.999999 MHz	5nS
80.000 ~ 170.000 MHz	4nS
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

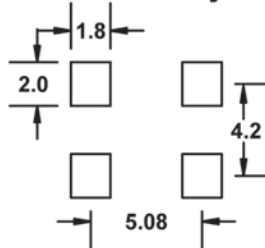
<sup>1</sup> Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, aging, shock, and vibration. \*Excludes shock/vibration.

<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.



### Recommended Solder Pad Layout



### Pin Connections

- #1 E/D
- #2 GND
- #3 Output
- #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