

# 5.0V, HCMOS SMD Oscillator with Standby



Model: F4101 SERIES

RoHS Compliant / Pb Free

Rev. 1/23/2009

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## FEATURES

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

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

Part Number	Model Number	Frequency Stability <sup>1</sup>	Operating Temperature	Frequency Range (MHz)
118-Frequency-xxxxx	F4101	±100PPM	-10 ~ +70°C	0.012 ~ 170.000
119-Frequency-xxxxx	F4101R	±100PPM	-40 ~ +85°C	0.012 ~ 170.000
120-Frequency-xxxxx	F4102	±50PPM	-10 ~ +70°C	0.012 ~ 170.000
121-Frequency-xxxxx	F4102R	±50PPM	-40 ~ +85°C	0.012 ~ 170.000
122-Frequency-xxxxx	F4103	±25PPM	-10 ~ +70°C	0.012 ~ 162.000
123-Frequency-xxxxx	F4103R*	±25PPM	-40 ~ +85°C	0.012 ~ 156.250
446-Frequency-xxxxx	F4104*	±20PPM	-10 ~ +70°C	0.012 ~ 162.000

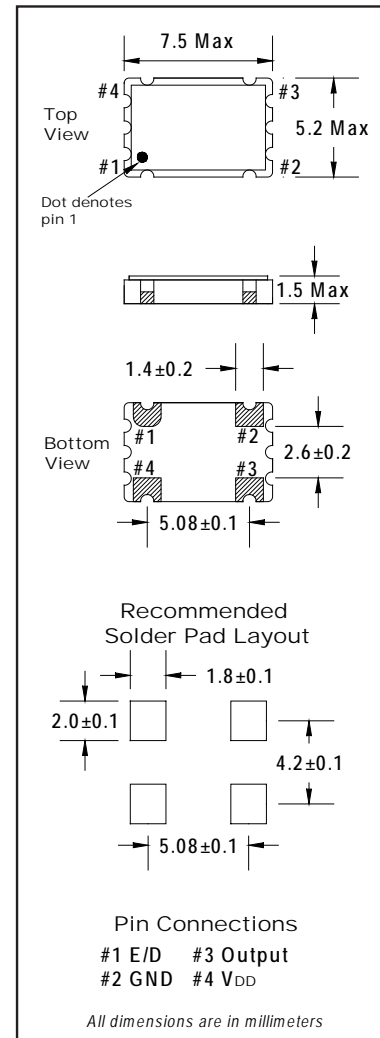
## • ELECTRICAL CHARACTERISTICS

PARAMETERS	MAX (unless otherwise noted)
Frequency Range (Fo)	0.012 ~ 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> )	
0.012 ~ 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> )	
0.012 ~ 79.999999 MHz	5nS
80.000 ~ 170.000 MHz	4nS
Fall Time (90% ~ 10% V <sub>DD</sub> ) (T <sub>F</sub> )	
0.012 ~ 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.

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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Need a  
Sample®

• TAPE SPECIFICATIONS (millimeters)							
MODEL	A	B	C	D	E	F	STD Reel QTY
F4101 Series	∅1.5	4.0	8.0	7.5	16.0	2.15	2,000

• REEL SPECIFICATIONS (millimeters)							
MODEL	G	H	I	J	K	L	M
F4101Series	2.0	∅13	∅21	∅80	∅255	17.5	2.0

