

# HCMOS, 7.5x5mm, 1.8V, SMD Oscillator



Model: F4500 SERIES

RoHS & REACH Compliant

Rev. 9/17/2012

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## FEATURES

- 1.8V Operation
- HCMOS Output
- Low Power Consumption
- Standby Function
- Tape and Reel (2,000 pcs. STD)

## • PART NUMBER SELECTION

Part Number	Model Number	Frequency Stability <sup>1</sup>	Operating Temperature (°C)	Frequency Range (MHz)
528-Frequency-xxxxx	F4500	±100PPM	-10 ~ +70	1.800 ~ 160.000
529-Frequency-xxxxx	F4500R	±100PPM	-40 ~ +85	1.800 ~ 160.000
530-Frequency-xxxxx	F4505	±50PPM	-10 ~ +70	1.800 ~ 160.000
531-Frequency-xxxxx	F4505R	±50PPM	-40 ~ +85	1.800 ~ 160.000
532-Frequency-xxxxx	F4506	±25PPM	-10 ~ +70	1.800 ~ 160.000
533-Frequency-xxxxx	F4506R	±25PPM*	-40 ~ +85	1.800 ~ 160.000
534-Frequency-xxxxx	F4508	±20PPM*	-10 ~ +70	1.800 ~ 125.000

## • ELECTRICAL CHARACTERISTICS

PARAMETERS	MAX (unless otherwise noted)
Frequency Range (Fo)	1.800 ~ 160.000 MHz
Storage Temperature Range (T <sub>STG</sub> )	-55°C ~ +125°C
Supply Voltage (V <sub>DD</sub> )	1.8V ± 5%
Input Current (I <sub>DD</sub> )	
1.000 ~ 32.100 MHz	7mA
32.100+ ~ 70.000 MHz	15mA
Output Symmetry (50% V <sub>DD</sub> )	40% ~ 60%
Rise Time (20% ~ 80% V <sub>DD</sub> ) (T <sub>R</sub> )	
1.800 ~ 32.100 MHz	5nS
32.100+ ~ 70.000 MHz	3.5nS
Fall Time (80% ~ 20% V <sub>DD</sub> ) (T <sub>F</sub> )	
1.800 ~ 32.100 MHz	5nS
32.100+ ~ 70.000 MHz	3.5nS
Output Voltage (V <sub>OL</sub> )	20% V <sub>DD</sub>
(V <sub>OH</sub> )	80% 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>	300nS
Output Enable Time <sup>2</sup>	10mS

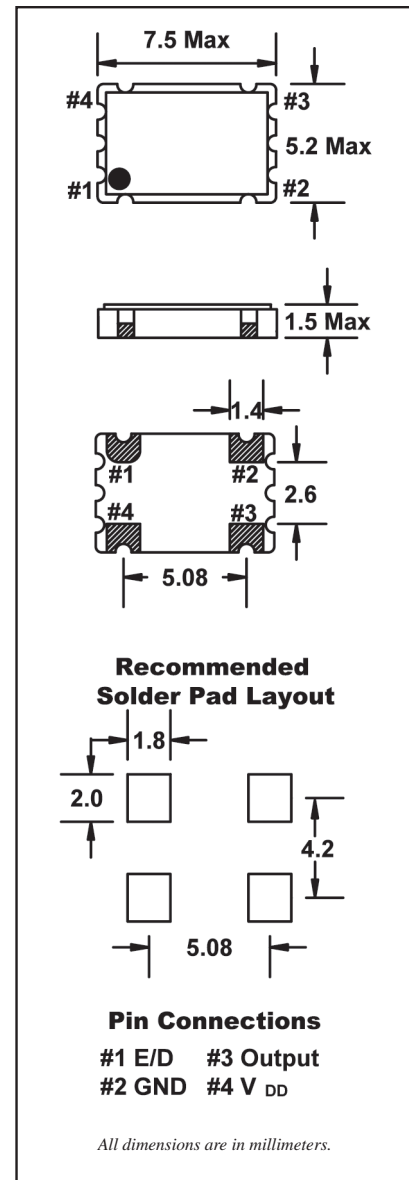
<sup>1</sup> Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, aging, shock, and vibration. \*Excludes Shock/Vibration

<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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• TAPE SPECIFICATIONS (millimeters)							
MODEL	A	B	C	D	E	F	STD Reel QTY
F4500 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
F4500 Series	2.0	∅13	∅21	∅80	∅255	17.5	2.0

