

# HCMOS 2.5x2mm 1.0 V SMD Oscillator



Model: F200 SERIES

RoHS Compliant / Pb Free

Rev. 12/2/2010

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

Part Number	Model Number	Frequency Stability <sup>1</sup>	Operating Temperature (°C)	Frequency Range (MHz)
823-Frequency-xxxxx	F200	±100PPM	-10 ~ +70	1.800 ~ 50.000
823A-Frequency-xxxxx	F200R	±100PPM	-40 ~ +85	1.800 ~ 50.000
823B-Frequency-xxxxx	F205	±50PPM	-10 ~ +70	1.800 ~ 50.000
823C-Frequency-xxxxx	F205R	±50PPM	-40 ~ +85	1.800 ~ 50.000
823D-Frequency-xxxxx	F206	±25PPM	-10 ~ +70	1.800 ~ 50.000
823E-Frequency-xxxxx	F206R	±25PPM*	-40 ~ +85	1.800 ~ 50.000
823F-Frequency-xxxxx	F208	±20PPm*	-10 ~ +70	1.800 ~ 50.000

## • ELECTRICAL CHARACTERISTICS

PARAMETERS	MAX (unless otherwise noted)
Frequency Range (Fo)	1.800 ~ 50.000 MHz
Storage Temperature Range (T <sub>STG</sub> )	-55°C ~ +125°C
Supply Voltage (V <sub>DD</sub> )	1.0V ± 5%
Input Current (I <sub>DD</sub> )	
1.800 ~ 32.100 MHz	2.5mA
32.100+ ~ 50.000 MHz	3.5mA
Output Symmetry (50% V <sub>DD</sub> )	40% ~ 60%
Rise Time (20% ~ 80% V <sub>DD</sub> )	
1.800 ~ 32.100 MHz	5.0nS
32.100+ ~ 50.000 MHz	3.5nS
Fall Time (80% ~ 20% V <sub>DD</sub> )	
1.800 ~ 32.100 MHz	5.0nS
32.100+ ~ 50.000 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	5µA
Start-up Time (T <sub>s</sub> )	5mS
Output Disable Time <sup>2</sup>	250nS
Output Enable Time <sup>2</sup>	5mS
Maximum Soldering Temp / Time	260°C / 10 Seconds
Moisture Sensitivity Level (MSL)	1
Termination Finish	Au

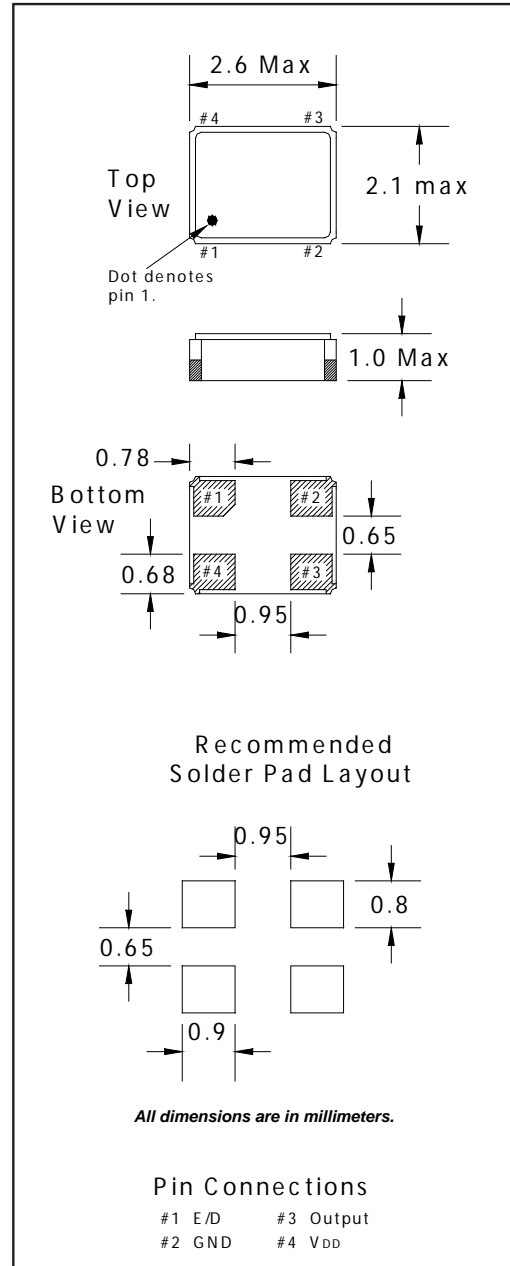
<sup>1</sup> Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, shock, and vibration. \*Excludes shock and vibration.

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

Notes:

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

\*Dimensional 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

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
F200 Series	∅1.5	4.0	4.0	3.5	8.0	1.15	3,000

## • REEL SPECIFICATIONS (millimeters)

MODEL	G	H	I	J	K	L	M
F200 Series	2.0	∅13	∅21	∅60	∅180	9.0	2.0

