

HCMOS 2.5x2mm 1.0 V SMD Oscillator



Model: F200 SERIES

RoHS Compliant / Pb Free

Rev. 12/2/2010

Page 1 of 2

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

Part Number	Model Number	Frequency Stability ¹	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 _{STG})	-55°C ~ +125°C
Supply Voltage (V _{DD})	1.0V ± 5%
Input Current (I _{DD})	
1.800 ~ 32.100 MHz	2.5mA
32.100+ ~ 50.000 MHz	3.5mA
Output Symmetry (50% V _{DD})	40% ~ 60%
Rise Time (20% ~ 80% V _{DD})	
1.800 ~ 32.100 MHz	5.0nS
32.100+ ~ 50.000 MHz	3.5nS
Fall Time (80% ~ 20% V _{DD})	
1.800 ~ 32.100 MHz	5.0nS
32.100+ ~ 50.000 MHz	3.5nS
Output Voltage (V _{OL})	20% V _{DD}
(V _{OH})	80% V _{DD} Min
Output Current (I _{OL})	2mA Min
(I _{OH})	-2mA Min
Output Load (HCMOS)	15pF
Standby Current	5μA
Start-up Time (T _s)	5mS
Output Disable Time ²	250nS
Output Enable Time ²	5mS
Maximum Soldering Temp / Time	260°C / 10 Seconds
Moisture Sensitivity Level (MSL)	1
Termination Finish	Au

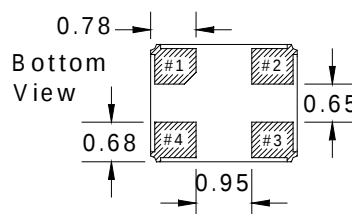
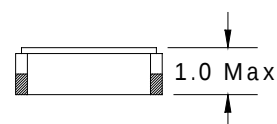
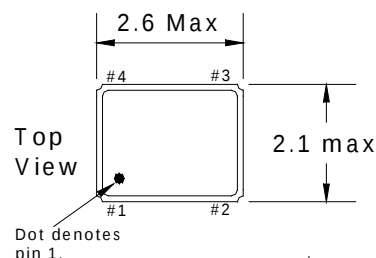
¹ Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, shock, and vibration. *Excludes shock and vibration.

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

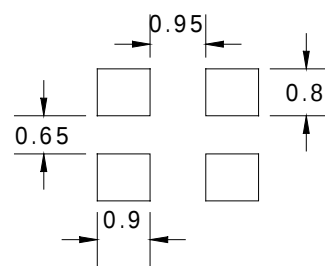
Notes:

*A 0.01μF capacitor should be placed between V_{DD} (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.



Recommended Solder Pad Layout



All dimensions are in millimeters.

Pin Connections

#1 E/D	#3 Output
#2 GND	#4 V _{DD}

• ENABLE / DISABLE FUNCTION

Pin 1	OUTPUT (Pin 3)
OPEN ²	ACTIVE
'1' Level V _{IH} ≥ 70% V _{DD}	ACTIVE
'0' Level V _{IL} ≤ 30% V _{DD}	High Z

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Page 2 of 2

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• TAPE SPECIFICATIONS (millimeters)								• REEL SPECIFICATIONS (millimeters)							
MODEL	A	B	C	D	E	F	STD Reel QTY	MODEL	G	H	I	J	K	L	M
F200 Series	Ø1.5	4.0	4.0	3.5	8.0	1.15	3,000	F200 Series	2.0	Ø13	Ø21	Ø60	Ø180	9.0	2.0

