

# HCMOS 3.2x2.5mm 3.3V SMD Oscillator



Model: F330 Series

RoHS Compliant / Pb Free

Rev. 10/21/2008

Page 1 of 2

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## FEATURES

- 3.3V 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 (°C)	Frequency Range (MHz)
584-Frequency-xxxxx	F330	±100PPM	-10 ~ +70	0.625 ~ 75.000
585-Frequency-xxxxx	F330R	±100PPM	-40 ~ +85	0.625 ~ 75.000
586-Frequency-xxxxx	F335	±50PPM	-10 ~ +70	0.625 ~ 75.000
587-Frequency-xxxxx	F335R	±50PPM	-40 ~ +85	0.625 ~ 75.000
588-Frequency-xxxxx	F336	±25PPM	-10 ~ +70	0.625 ~ 75.000
589-Frequency-xxxxx	F336R	±25PPM*	-40 ~ +85	1.800 ~ 50.000
590-Frequency-xxxxx	F338	±20PPM*	-10 ~ +70	1.800 ~ 50.000

## • ELECTRICAL CHARACTERISTICS

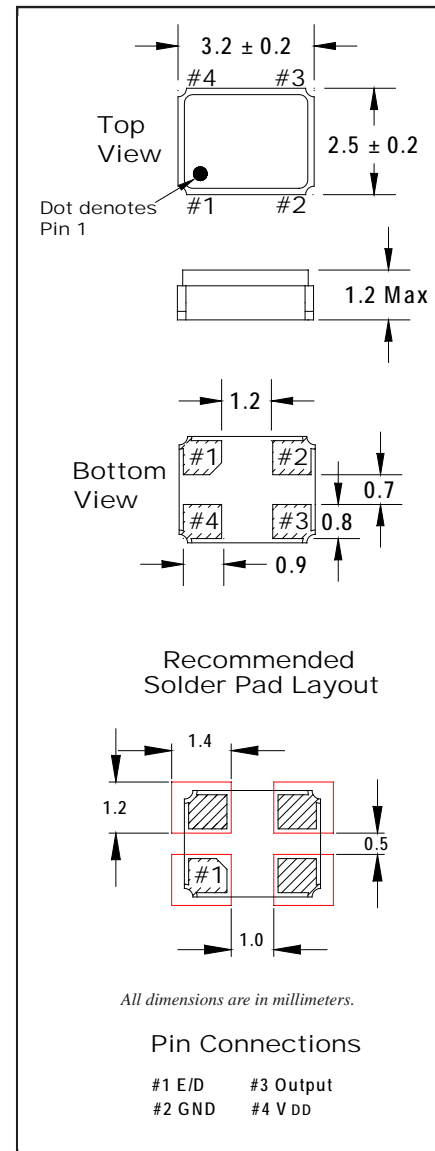
PARAMETERS	MAX (unless otherwise noted)
Frequency Range (Fo)	0.625 ~ 75.000 MHz
Storage Temperature Range (TSTG)	-55°C ~ +125°C
Supply Voltage (VDD)	3.3V ± 10%
Input Current (IDD)	
0.625 ~ 20.000 MHz	7mA
20.000+ ~ 40.000 MHz	13mA
40.000+ ~ 60.000 MHz	19mA
60.000+ ~ 75.000 MHz	24mA
Output Symmetry (50% VDD)	45% ~ 55%
Rise Time (10% ~ 90% VDD) (TR)	6nS
Fall Time (90% ~ 10% VDD) (TF)	6nS
Output Voltage (VOL)	10% VDD
(VOH)	90% VDD Min
Output Current (IOL)	2mA Min
(IOH)	-2mA Min
Output Load (HCMOS)	15pF
Standby Current	10µA
Start-up Time (Ts)	5mS
Output Disable Time <sup>2</sup>	150nS
Output Enable Time <sup>2</sup>	5mS
Reflow Soldering Temp	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, 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 0.01 µF bypass capacitor should be placed between VDD (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 VIH ≥ 70% VDD	ACTIVE
'0' Level VIL ≤ 30% VDD	High Z

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Page 2 of 2

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• TAPE SPECIFICATIONS (millimeters)							
MODEL	A	B	C	D	E	F	STD Reel QTY
F330 Series	∅1.5	4.0	4.0	3.5	8.0	1.4	2,000

• REEL SPECIFICATIONS (millimeters)							
MODEL	G	H	I	J	K	L	M
F330 Series	2.0	∅13	∅21	∅60	∅180	9.0	1.2

