

HCMOS 2.5x2mm 3.3V Oscillator



Model: F230 SERIES

RoHS Compliant / Pb Free

Rev. 5/20/2008

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Need a
Sample®

FEATURES

- 3.3V Operation
- Standby Function
- Tape and Reel (3,000 pcs. STD)

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

Part Number	Model Number	Frequency Stability ¹	Operating Temperature (°C)	Frequency Range (MHz)
781-Frequency-xxxxx	F230	±100PPM	-20 ~ +70	0.750 ~ 50.000
781R-Frequency-xxxxx	F230R	±100PPM	-40 ~ +85	0.750 ~ 50.000
782-Frequency-xxxxx	F235	±50PPM	-20 ~ +70	0.750 ~ 50.000
782R-Frequency-xxxxx	F235R	±50PPM	-40 ~ +85	0.750 ~ 50.000
783-Frequency-xxxxx	F236	±25PPM	-20 ~ +70	0.750 ~ 50.000

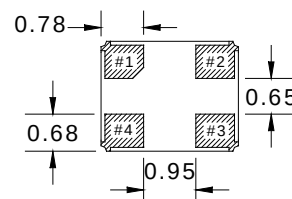
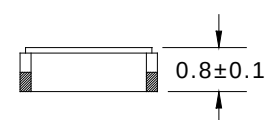
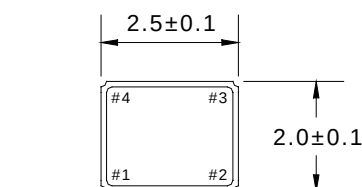
• ELECTRICAL CHARACTERISTICS

PARAMETERS	MAX (unless otherwise noted)
Frequency Range (Fo)	0.750 ~ 50.000 MHz
Storage Temperature Range (T _{STG})	-55°C ~ +100°C
Supply Voltage (V _{DD})	3.3V ± 5%
Input Current (I _{DD})	
0.750 ~ 19.999 MHz	7mA
19.999+ ~ 39.999 MHz	13mA
39.999+ ~ 50.000 MHz	19mA
Output Symmetry (50% V _{DD})	45% ~ 55%
Rise Time (10% ~ 90% V _{DD}) (T _R)	10nS
Fall Time (90% ~ 10% V _{DD}) (T _F)	10nS
Output Voltage (V _{OL})	10% V _{DD}
(V _{OH})	90% V _{DD} Min
Output Current (I _{OL})	5mA Min
(I _{OH})	-5mA Min
Output Load (HCMOS)	15pF
Standby Current	5µA
Start-up Time (T _s)	10mS
Output Disable Time ²	150nS
Output Enable Time ²	10mS
Aging (Ta=25°C: per year)	± 5 PPM
Reflow Soldering Temp	260°C / 10 Seconds
Moisture Sensitivity Level (MSL)	1
Termination Finish	Au

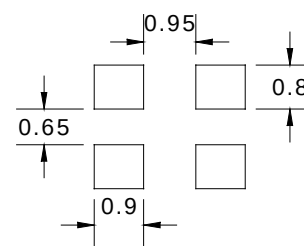
¹ Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, shock, and vibration.

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

Note: A 0.01µF capacitor should be placed between V_{DD} (Pin 4) and GND (Pin2) to minimize power supply noise. All specifications subject to change without notice.



Recommended Solder Pad Layout



All dimensions are in millimeters.

Pin Connection

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

• ENABLE / DISABLE FUNCTION

INH (Pin 1)	OUTPUT (Pin 3)
OPEN	ACTIVE
'1' Level V _{IH} ≥ 80% V _{DD}	ACTIVE
'0' Level V _{IL} ≤ 20% V _{DD}	High Z

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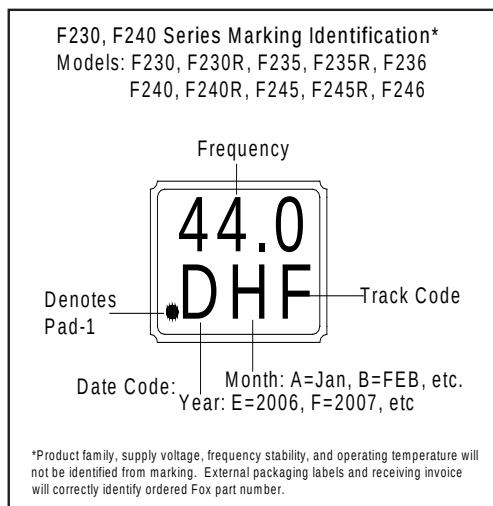
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• TAPE SPECIFICATIONS (millimeters)							
MODEL	A	B	C	D	E	F	STD Reel QTY
F230 Series	Ø1.5	4.0	8.0	7.5	16.0	2.5	3,000

• REEL SPECIFICATIONS (millimeters)							
MODEL	G	H	I	J	K	L	M
F230 Series	2.0	Ø13	Ø21	Ø80	Ø250	13.5	2.0

