HCMOS 2.5x2mm 1.8V Oscillator

Model: F210 SERIES **RoHS & REACH Compliant** **Rev. 9/17/2012**

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Need a Sample®

FEATURES

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

• PART NUMBER SELECTION

Part Number	Model Number	Frequency Stability[1]	Operating Temperature (ºC)	Frequency Range (MHz)
819-Frequency-xxxxx	F210	±100PPM	-10 ~ +70	0.750 ~ 50.000
819A-Frequency-xxxxx	F210R	±100PPM	-40 ~ +85	0.750 ~ 50.000
819B-Frequency-xxxxx	F215	±50PPM	-10 ~ +70	0.750 ~ 50.000
819C-Frequency-xxxxx	F215R	±50PPM	-40 ~ +85	0.750 ~ 50.000
819D-Frequency-xxxxx	F216	±25PPM	-10 ~ +70	0.750 ~ 50.000
819E-Frequency-xxxxx	F216R	±25PPM*	-40 ~ +85	1.800 ~ 50.000

• ELECTRICAL CHARACTERISTICS

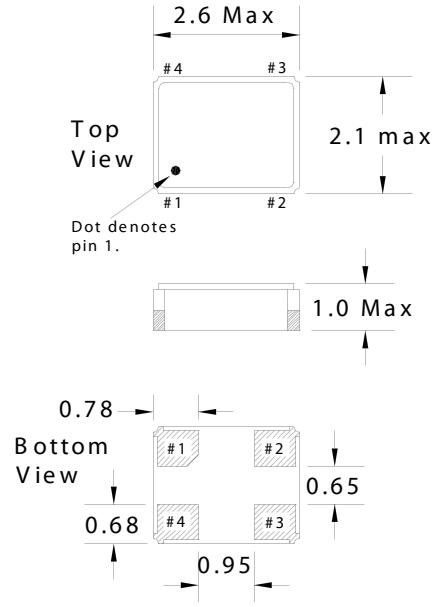
PARAMETERS	MAX (unless otherwise noted)
Frequency Range (Fo)	0.750 ~ 50.000 MHz
Storage Temperature Range (Tstg)	-55ºC ~ +100ºC
Supply Voltage (Vdd)	1.8V ± 5%
Input Current (Idd)	
0.750 ~ 10.000 MHz	2.5mA
10.000+ ~ 20.000 MHz	3.5mA
20.000+ ~ 30.000 MHz	4.0mA
30.000+ ~ 40.000 MHz	4.5mA
40.000+ ~ 50.000 MHz	5.0mA
Output Symmetry (50% Vdd)	45% ~ 55%
Rise Time (10% ~ 90% Vdd)	10nS
Fall Time (90% ~ 10% Vdd)	10nS
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)	10mS
Output Disable Time [2]	10uS
Output Enable Time [2]	10mS
Reflow Soldering Temp	260ºC / 10 Seconds
Moisture Sensitivity Level (MSL)	1
Termination Finish	Au

[1] Inclusive of 25ºC tolerance, operating temperature range, input voltage change, load change, reflow, and one year aging *Excludes Shock/Vibration.

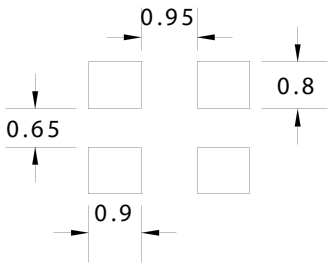
[2] An internal pullup resistor from pin 1 to pin 4 allows active output if pin 1 is left open.

Note: A 0.01µF capacitor should be placed between Vdd (Pin 4) and GND (Pin2) to minimize power supply 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.



Recommended Solder Pad Layout



All dimensions are in millimeters.

Pin Connections

#1 E/D	#3 Output
#2 GND	#4 Vdd

• ENABLE / DISABLE FUNCTION

Pin 1	OUTPUT (Pin 3)
OPEN[2]	ACTIVE
'1' Level Vih ≥ 70% Vdd	ACTIVE
'0' Level Vil ≤ 30% Vdd	High Z

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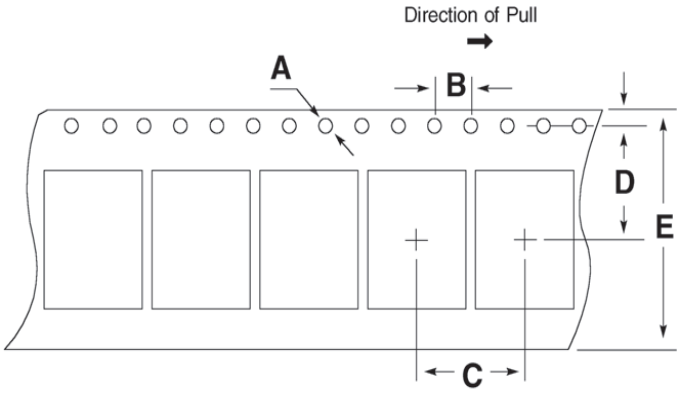
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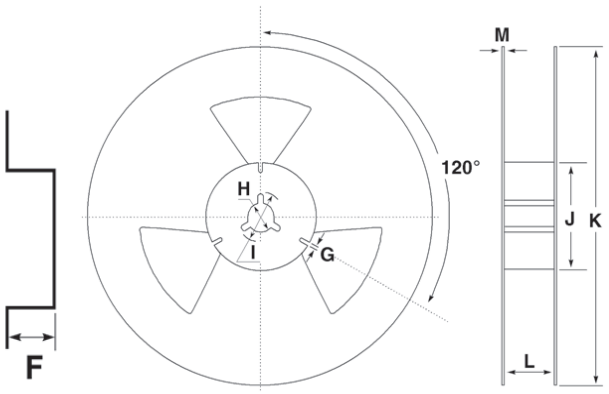
• TAPE SPECIFICATIONS (millimeters)

MODEL	A	B	C	D	E	F	STD Reel QTY
F210 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
F210 Series	2.0	∅13	∅21	∅60	∅180	9.0	2.0





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