HCMOS 3.2x2.5mm 1.0 V SMD Oscillator

Model: F300 SERIES | **RoHS Compliant / Pb Free** | **Rev. 12/12/2008**

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• PART NUMBER SELECTION

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Part Number	Model Number	Frequency Stability[1]	Operating Temperature (ºC)	Frequency Range (MHz)
824-Frequency-xxxxx	F300	±100PPM	-10 ~ +70	1.800 ~ 50.000
824A-Frequency-xxxxx	F300R	±100PPM	-40 ~ +85	1.800 ~ 50.000
824B-Frequency-xxxxx	F305	±50PPM	-10 ~ +70	1.800 ~ 50.000
824C-Frequency-xxxxx	F305R	±50PPM	-40 ~ +85	1.800 ~ 50.000
824D-Frequency-xxxxx	F306	±25PPM	-10 ~ +70	1.800 ~ 50.000
824E-Frequency-xxxxx	F306R	±25PPM*	-40 ~ +85	1.800 ~ 50.000
824F-Frequency-xxxxx	F308	±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 (Tstg)	-55ºC ~ +125ºC
Supply Voltage (VDD)	1.0V ± 5%
Input Current (IDD) 1.800 ~ 32.100 MHz 32.100+ ~ 50.000 MHz	 2.5mA 3.5mA
Output Symmetry (50% VDD)	40% ~ 60%
Rise Time (20% ~ 80% VDD) 1.800 ~ 32.100 MHz 32.100+ ~ 50.000 MHz	 5nS 3.5nS
Fall Time (80% ~ 20% VDD) 1.800 ~ 32.100 MHz 32.100+ ~ 50.000 MHz	 5.0nS 3.5nS
Output Voltage (VOL) (VOH)	20% VDD 80% VDD Min
Output Current (IOL) (IOH)	2mA Min -2mA Min
Output Load (HCMOS)	15pF
Standby Current	5µA
Start-up Time (Ts)	5mS
Output Disable Time [2]	300nS
Output Enable Time [2]	5mS
Maximum Soldering Temp / Time	260ºC / 10 Seconds
Moisture Sensitivity Level (MSL)	1
Termination Finish	Au

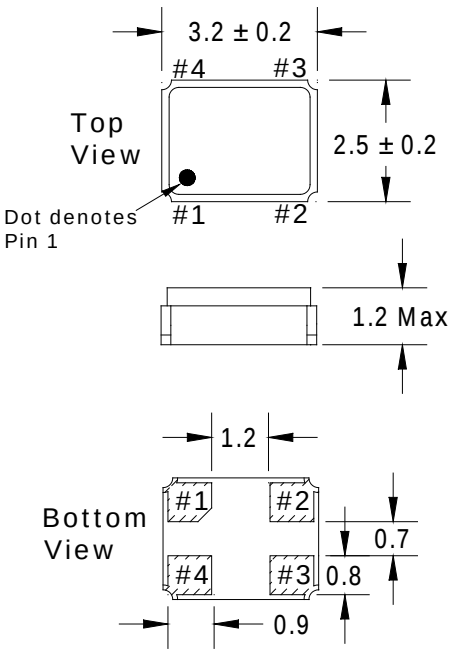
[1] Inclusive of 25ºC tolerance, operating temperature range, input voltage change, load change, shock, and vibration. *Excludes shock and vibration.

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

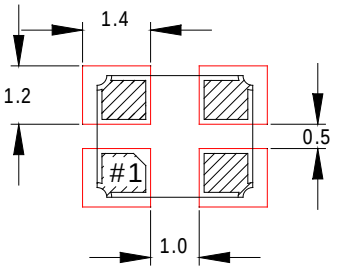
Notes:

*A 0.01µF capacitor should be placed between VDD (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 VIH ≥ 70% VDD	ACTIVE
'0' Level VIL ≤ 30% VDD	High Z

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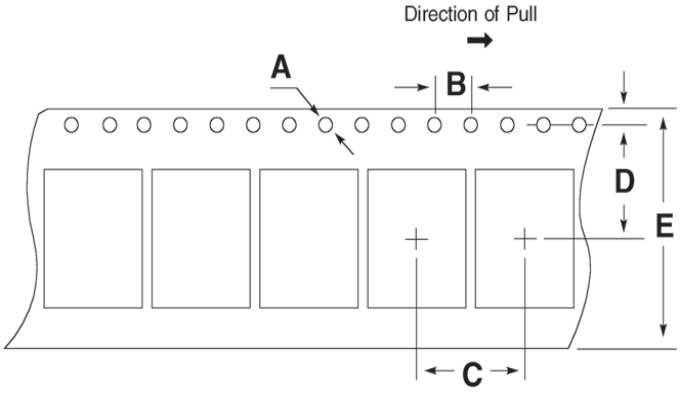
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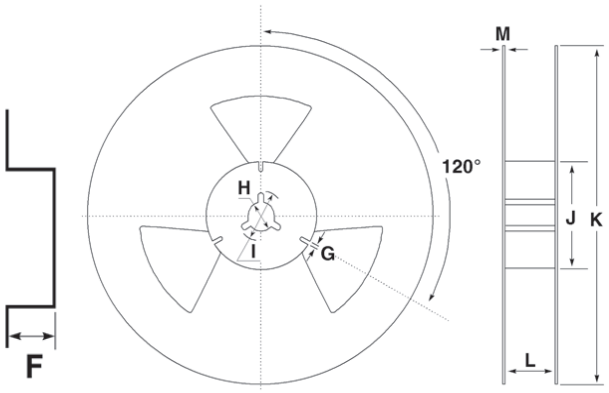
• TAPE SPECIFICATIONS (millimeters)

MODEL	A	B	C	D	E	F	STD Reel QTY
F300 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
F300 Series	2.0	∅13	∅21	∅60	∅180	9.0	1.2





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