

# HCMOS 5x3.2mm 2.85V SMD Oscillator



Model: F520L Series

RoHS Compliant / Pb Free

Rev. 5/7/2009

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## FEATURES

- 2.85V Operation
- HCMOS Output
- Standby Function
- Tape and Reel (1,000 pcs. STD)

## OPTIONS

- 5.0V (F550L) Version Available

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

Part Number	Model Number	Frequency Stability <sup>1</sup>	Operating Temperature (°C)	Frequency Range (MHz)
661-Frequency-xxxxx	F520L	±100PPM	-10 ~ +70	1.544 ~ 80.000
662-Frequency-xxxxx	F520LR	±100PPM	-40 ~ +85	1.544 ~ 80.000
663-Frequency-xxxxx	F525L	±50PPM	-10 ~ +70	1.544 ~ 80.000
664-Frequency-xxxxx	F525LR	±50PPM	-40 ~ +85	1.544 ~ 80.000
499-Frequency-xxxxx	F526L	±25PPM	-10 ~ +70	1.544 ~ 80.000
659-Frequency-xxxxx	F526LR	±25PPM*	-40 ~ +85	1.544 ~ 80.000
520-Frequency-xxxxx	F528L	±20PPM*	-10 ~ +70	1.544 ~ 80.000

## • ELECTRICAL CHARACTERISTICS

PARAMETERS	MAX (unless otherwise noted)
Frequency Range (Fo)	1.544 ~ 80.000 MHz
Storage Temperature Range (T <sub>STG</sub> )	-55°C ~ +125°C
Supply Voltage (V <sub>DD</sub> )	2.85V ± 5%
Input Current (I <sub>DD</sub> )	
1.544 ~ 32.000 MHz	12mA
32.000+ ~ 50.000 MHz	20mA
50.000+ ~ 80.000 MHz	40mA
Output Symmetry (50% V <sub>DD</sub> )	45% ~ 55%
Rise Time (10% ~ 90% V <sub>DD</sub> ) (T <sub>R</sub> )	5nS
Fall Time (90% ~ 10% V <sub>DD</sub> ) (T <sub>F</sub> )	5nS
Output Voltage (V <sub>OL</sub> )	10% V <sub>DD</sub>
(V <sub>OH</sub> )	90% V <sub>DD</sub> Min
Output Current (I <sub>OL</sub> )	4mA Min
(I <sub>OH</sub> )	-4mA Min
Output Load (HCMOS)	15pF
Standby Current	10µA
Start-up Time (T <sub>S</sub> )	10mS
Output Disable Time <sup>2</sup>	150nS
Output Enable Time <sup>2</sup>	10mS

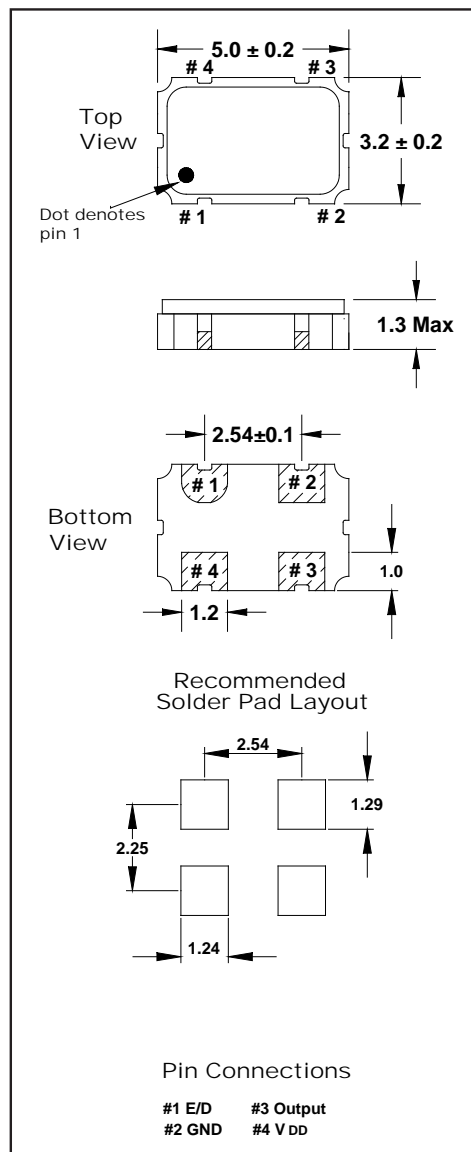
<sup>1</sup> Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, aging, shock, and vibration. \*Excludes Shock/Vibration

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

Note: A 0.01µF bypass capacitor should be placed between V<sub>DD</sub> (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 V <sub>IH</sub> ≥ 70% V <sub>DD</sub>	ACTIVE
'0' Level V <sub>IL</sub> ≤ 30% V <sub>DD</sub>	High Z

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Need a  
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• TAPE SPECIFICATIONS (millimeters)							
MODEL	A	B	C	D	E	F	STD Reel QTY
F520L Series	∅1.5	4.0	8.0	5.5	12.0	1.5	1,000

• REEL SPECIFICATIONS (millimeters)							
MODEL	G	H	I	J	K	L	M
F520L Series	2.0	∅13	∅21	∅62	∅180	13.5	2.0

