

# 2.5V HCSL Oscillator



Model: F740SL SERIES

RoHS Compliant / REACH Compliant

Rev. 2/11/2013

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## FEATURES

- HCL Differential Output
- Low Phase Jitter (under 1pS RMS 12kHz~20MHz)
- Tape and Reel (2,000 pcs. STD)

## • PART NUMBER SELECTION

Part Number	Model Number	Frequency Stability <sup>1</sup>	Operating Temperature (°C)	Frequency Range (MHz)
844-Frequency-xxxxx	F740SL	±100PPM	0 ~ +70	15.000 ~ 160.000
844A-Frequency-xxxxx	F740SLR	±100PPM	-40 ~ +85	15.000 ~ 160.000
844B-Frequency-xxxxx	F745SL	±50PPM	0 ~ +70	15.000 ~ 160.000
844C-Frequency-xxxxx	F745SLR	±50PPM	-40 ~ +85	15.000 ~ 160.000
844D-Frequency-xxxxx	F746SL	±25PPM	0 ~ +70	15.000 ~ 160.000
844E-Frequency-xxxxx	F746SLR	±25PPM	-40 ~ +85	15.000 ~ 160.000

## • ELECTRICAL CHARACTERISTICS

PARAMETERS	MAX (unless otherwise noted)
Frequency Range (Fo)	15.000 ~ 160.000 MHz
Storage Temperature Range (TSTG)	-55°C ~ +125°C
Supply Voltage (VDD)	2.5V ± 5%
Input Current (IDD)	40mA
Output Symmetry (Cross Point)	45% ~ 55%
Rise/Fall Time (0.175 ~ 0.525V)	
15.000 ~ 99.999999 MHz	1.0nS
100.000 ~ 160.000 MHz	0.7nS
Output Voltage (VOL)	-0.15 ~ 0.15V
(VOH)	0.58 ~ 0.85V
Output Swing (VOPP)	0.6V Min
Output Load	50 Ohms to GND
Standby Current	10µA
Start-up Time (Ts)	10mS
Output Disable Time <sup>2</sup>	200nS
Output Enable Time <sup>2</sup>	10mS
Aging (per year @ 25°C)	±3 PPM
Phase Jitter (12kHz ~ 20MHz)	1pS RMS
Maximum Soldering Temp / Time	260°C / 10 Seconds
Moisture Sensitivity Level (MSL)	1
Termination Finish	Au

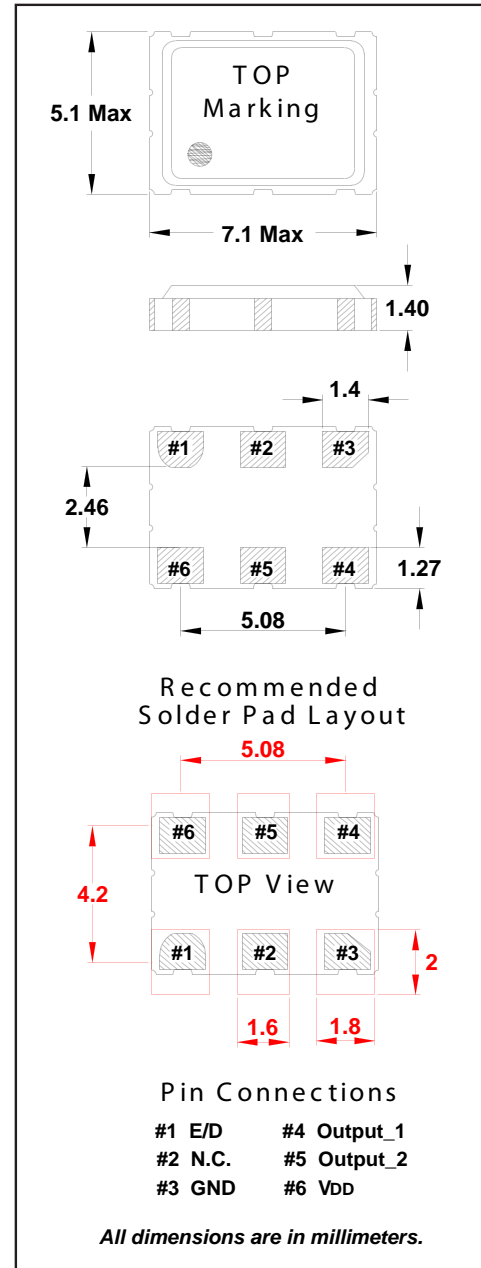
<sup>1</sup> Inclusive of 25°C tolerance, operating temperature range.

<sup>2</sup> An internal pullup resistor from pin 1 to pin 6 allows active output if pin 1 is left open.

Note: A 0.01µF capacitor should be placed between VDD (Pin 6) and GND (Pin3) 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.



• ENABLE / DISABLE FUNCTION	
(Pin 1)	OUTPUT (Pin 4, Pin 5)
OPEN <sup>2</sup>	ACTIVE
'1' Level VIH ≥ 70% VDD	ACTIVE
'0' Level VIL ≤ 30% VDD	High Z

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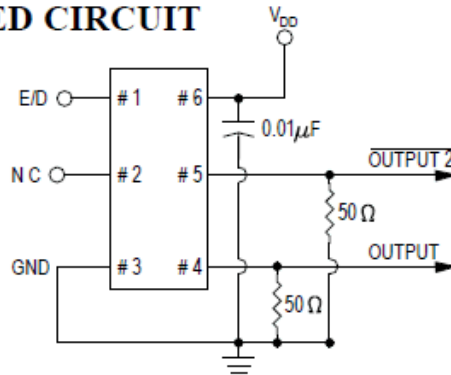
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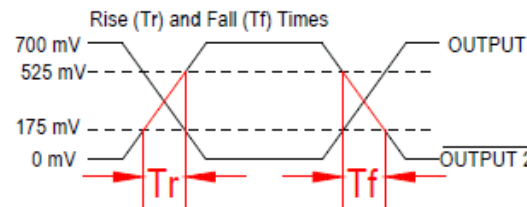
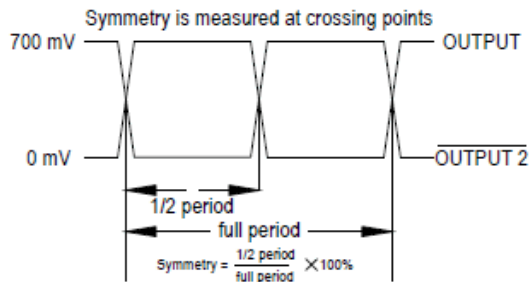
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## RECOMMENDED CIRCUIT



Recommended Output Termination  
50 Ohms to Ground

## WAVEFORM CHARACTERISTICS



## TAPE SPECIFICATIONS (millimeters)

MODEL	A	B	C	D	E	F	STD Reel QTY
F740SL	∅1.55	4.0	8.0	7.5	16.0	2.0	2,000

## REEL SPECIFICATIONS (millimeters)

MODEL	G	H	I	J	K	L	M
F740SL	2.5	∅13.2	∅21	∅60.5	∅180	17.0	1.5

