

Features

- HCSL Differential Output
- Stabilities to ± 25 PPM
- Temperature Ranges as wide as -40°C to $+85^{\circ}\text{C}$
- Supply Voltage: 2.5V, 3.3V

2.5 V SPECIFICATIONS	
PARAMETERS	MAX (Unless otherwise noted)
Frequency Range (F_o)	15.000 ~ 160.000MHz
Temperature Range Storage (T_{STG})	$-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$
Supply Voltage (V_{DD})	2.5 V $\pm 5\%$
Input Current (I_{DD})	40 mA
Standby Current	10 μA
Output Symmetry (50% V_{P-P})	45 % ~ 55 %
Rise Time (20%~80% V_{P-P}) (T_R/T_F)	
15.000 ~ 99.999999 MHz	1.0 nS
100.0 ~ 160.000 MHz	0.7 nS
Output Voltage (V_{OL})	$-0.15\text{V} \sim 0.15\text{V}$
(V_{OH})	$0.55\text{V} \sim 0.85\text{V}$
Output Swing (V_{OPP})	0.6V Min
Output Load	50 Ohms to GND
Start-up Time (T_S)	10 mS
Output Disable Time ¹	200 nS
Output Enable Time ¹	10 mS
Aging (per year @ 25C)	± 3 PPM
Phase Jitter (12kHz~20MHz)	1 pS RMS

ENABLE / DISABLE FUNCTION	
Pin	Output (pin 3)
OPEN ¹	Active
'1' Level $V_{IH} \geq 70\%V_{DD}$	Active
'0' Level $V_{IL} \leq 30\%V_{DD}$	High Z

Available Options by Stability & Operating Temp for 2.5V		
Frequency Stability ²	Operating Temperature ($^{\circ}\text{C}$)	Frequency Range (MHz)
$\pm 100\text{PPM}$	0 ~ +70	15.000 ~ 160.000
$\pm 100\text{PPM}$	-40 ~ +85	15.000 ~ 160.000
$\pm 50\text{PPM}$	0 ~ +70	15.000 ~ 160.000
$\pm 50\text{PPM}$	-40 ~ +85	15.000 ~ 160.000
$\pm 25\text{PPM}$	0 ~ +70	15.000 ~ 160.000
$\pm 25\text{PPM}$	-40 ~ +85	15.000 ~ 160.000

¹ An internal pull-up resistor from pin 1 to pin 4 allows active output if pin 1 is left open

² Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, shock, vibration, reflow, and one-year aging.

3.3V SPECIFICATIONS	
PARAMETERS	MAX (Unless otherwise noted)
Frequency Range (Fo)	15.000 ~ 160.000MHz
Temperature Range Storage (T _{STG})	-55°C ~ +125°C
Supply Voltage (V _{DD})	3.3 V±10%
Input Current (I _{DD})	40 mA
Standby Current	10 µA
Output Symmetry (50% V _{P-P})	45 % ~ 55 %
Rise Time (20%~80% V _{P-P}) (T _R /T _F)	
15.000 ~ 99.999999 MHz	1.0 nS
101.0 ~ 160.000 MHz	0.7 nS
Output Voltage (VOL)	-0.15V ~ 0.15V
(VOH)	0.66V ~ 0.85V
Output Swing (V _{OPP})	0.65V Min
Output Load	50 Ohms to GND
Start-up Time (T _S)	10 mS
Output Disable Time ¹	200 nS
Output Enable Time ¹	10 mS
Aging (per year @ 25C)	±3 PPM
Phase Jitter (12kHz~20MHz)	1 pS RMS

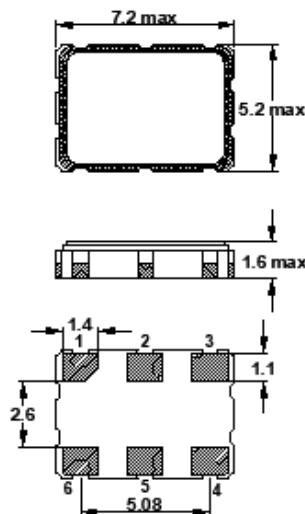
ENABLE / DISABLE FUNCTION	
Pin	Output (pin 3)
OPEN ¹	Active
'1' Level V _{IH} ≥ 70%V _{DD}	Active
'0' Level V _{IL} ≤ 30%V _{DD}	High Z

Available Options by Stability & Operating Temp for 3.3V		
Frequency Stability ²	Operating Temperature (°C)	Frequency Range (MHz)
±100PPM	0 ~ +70	15.000 ~ 160.000
±100PPM	-40 ~ +85	15.000 ~ 160.000
±50PPM	0 ~ +70	15.000 ~ 160.000
±50PPM	-40 ~ +85	15.000 ~ 160.000
±25PPM	0 ~ +70	15.000 ~ 160.000
±25PPM	-40 ~ +85	15.000 ~ 160.000

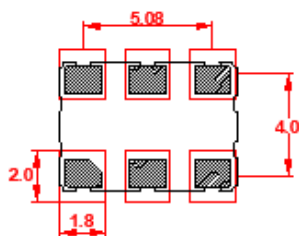
¹ An internal pull-up resistor from pin 1 to pin 4 allows active output if pin 1 is left open

² Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, shock, vibration, reflow, and one-year aging.

DIMENSIONS / MECHANICAL SPECIFICATIONS



Recommended Solder Pad Layout



Pin Connections

#1 E/D #4 Output_1
#2 N.C. #5 Output_2
#3 GND #6 VDD

All dimensions are in millimeters.

Note:

1. A 0.01 μ F capacitor should be placed between V_{DD} (Pin 6) and G_{ND} (Pin3) to minimize power supply line noise.
2. Dimensional drawing is for reference to critical specifications defined by size measurements. Certain non-critical visual attributes, such as side castellations, pin shape etc. may vary.

STANDARD SPECIFICATIONS

PARAMETERS	MAX (Unless otherwise noted)
Maximum Soldering Temp / Time	260°C / 10 Seconds x 2
Moisture Sensitivity Level (MSL)	1
Termination Finish	Au over Ni
Seal Method	Seam
Lead (Pb) Free	Yes
REACH/REACH Compliant	Yes

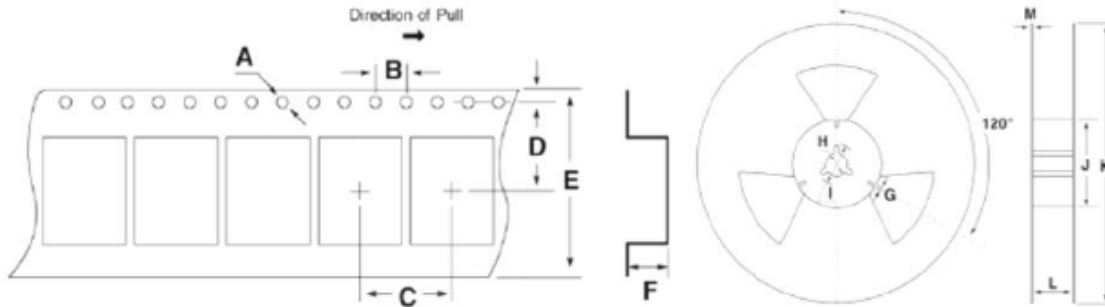
FO7SL

(Former F730SL, F740SL Series)

7.2 x 5.2mm
SMD HCSL Oscillator



TAPE SPECIFICATIONS (mm)							REEL SPECIFICATIONS (mm)						
A	B	C	D	E	F	REEL QTY	G	H	I	J	K	L	M
ø1.5	4.0	8.0	7.5	16.0	2.0	-T1 = 1,000 -T2 = 2,000	2.5	ø13.2	ø21	ø60.5	ø180	17.0	1.5



Available Options & Part Identification for SMD LVDS Oscillator O7SL*

Sample PN: **FO7SLCBM25.0 -T1**

F	O7SL	C	B	M	25.0	-T1
Fox	Model Number	Voltage H = 2.5V±5% C = 3.3V±10%	Stability A = ±100 PPM B = ±50 PPM D = ±25 PPM	Operating Temperature C = -20 to +70°C M = -40 to +85°C	Frequency (MHz)	Reel Quantity Blank = Bulk T1 = 1,000 pcs T2 = 2,000 pcs

* Not all frequencies in the frequency range, or every combination of stability, temp range, and voltage available. See stabilities and op temps for each V_{DD}.

Reliability Test Conditions

Please contact Abracon Quality Assurance department