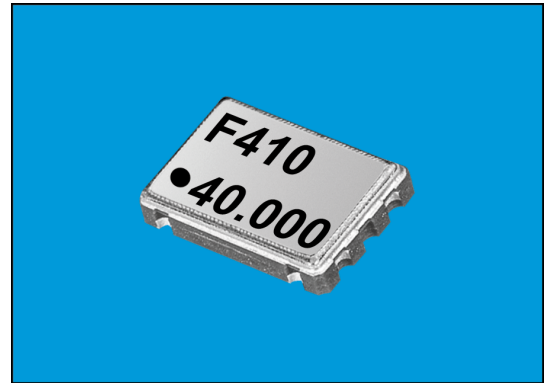


## 3.3V HCMOS SMD OSCILLATOR WITH STANDBY F4100

The F4100 is our miniature 3.3 Volt oscillator which features a standby mode. Among the many benefits of the 3.3 Volt oscillator are an increase in battery life, reduced heat generation and improved EMI, packaged with the low profile necessary for today's advanced portable PC and instrumentation designs.

### FEATURES

- Miniature Profile
- Lower Power Consumption
- Standby Function
- Tape & Reel (2,000 pcs. STD)



### • ELECTRICAL CHARACTERISTICS (V<sub>DD</sub> = 3.3V, C<sub>L</sub> = 15pF)

PARAMETERS	FREQUENCY RANGE	CONDITIONS	MIN	MAX	UNITS
Frequency Range (F <sub>o</sub> )		<sup>1</sup>	1.000	156.250	MHz
Frequency Stability	1.544 ~ 156.250	All Conditions <sup>1</sup>	-100	+100	PPM
Temperature Range Operating (TOPR)		'R' Version	-10	+70	°C
Storage (TSTG)			-40	+85	
			-55	+125	
Supply Voltage (V <sub>DD</sub> )			+2.97	+3.63	V
Input Current (I <sub>DD</sub> )	1.544 ~ 32.000 32.000+ ~ 50.000 50.000+ ~ 67.000 67.000+ ~ 156.250			15 20 25 40	mA
Output Symmetry	1.544 ~ 50.000 50.000+ ~ 156.250	1.65V	45 40	55 60	%
Rise Time (T <sub>R</sub> )	1.544 ~ 156.250	0.33V to 2.97V		6	nS
Fall Time (T <sub>F</sub> )	1.544 ~ 156.250	2.97V to 0.33V		6	nS
Output Voltage (V <sub>OL</sub> ) (V <sub>OH</sub> )	1.544 ~ 156.250	I <sub>OL</sub> = 2 mA I <sub>OH</sub> = -2 mA	2.97	0.33	V
Output Current (I <sub>OL</sub> ) (I <sub>OH</sub> )	1.544 ~ 156.250	V <sub>OL</sub> = 0.33 V V <sub>OH</sub> = 2.97 V		2 -2	mA
Output Load	1.544 ~ 156.250	HCMOS		15	pF
Standby Current	1.544 ~ 156.250	V <sub>IL</sub> ≤ 0.99 V		10	μA
Start-up Time (T <sub>s</sub> )	1.544 ~ 156.250			10	mS
Output Disable Time	1.544 ~ 156.250	See Table <sup>2</sup>		150	nS
Output Enable Time				10	mS

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

<sup>3</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.

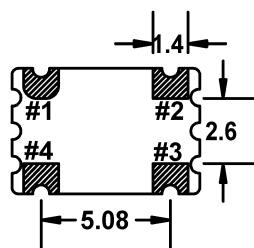
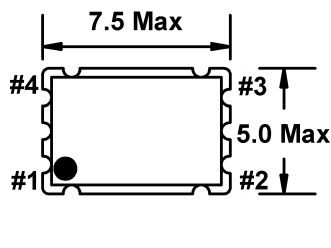
All specifications subject to change without notice. Rev. 11/30/01

### • MODEL NUMBER SELECTION

Frequency Stability	Operating Temperature (°C)	Frequency Range (MHz)	Model Number
±100PPM	-10 ~ +70	1.000 ~ 156.250	F4100
±100PPM	-40 ~ +85	1.000 ~ 125.000	F4100R
±50PPM	-10 ~ +70	1.000 ~ 156.250	F4105
±50PPM	-40 ~ +85	1.000 ~ 55.000	F4105R
±25PPM	-10 ~ +70	1.000 ~ 106.25	F4106
±25PPM	-40 ~ +85	1.000 ~ 50.000	F4106R
±20PPM	-10 ~ +70	1.000 ~ 80.000	F4108

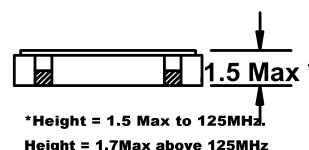
### • ENABLE / DISABLE FUNCTION <sup>2</sup>

Pin 1	OUTPUT (Pin 3)
OPEN <sup>3</sup>	ACTIVE
'1' Level V <sub>IH</sub> ≥ 2.31 V	ACTIVE
'0' Level V <sub>IL</sub> ≤ 0.99 V	High Z

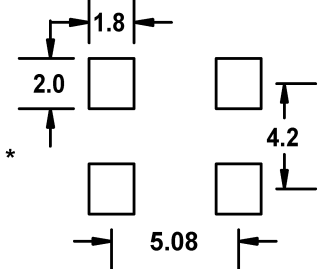


### Pin Connections

#1 E/D #3 Output  
#2 GND #4 3.3V<sub>DC</sub>



### Recommended Solder Pad Layout



Dimensions are in millimeters.  
See page 74 for tape and reel specifications.