

1.8V HCMOS CERAMIC SMD OSCILLATOR WITH STANDBY F510L SERIES

FEATURES

- 1.8V Operation
- HCMOS Output
- Low Power Consumption
- Standby Function
- Tape and Reel (2,000 pcs. STD)
- Pb Free



• MODEL NUMBER SELECTION

Model Number	Frequency Stability ¹	Operating Temperature (°C)	Frequency Range (MHz)
F510L	±100PPM	-10 ~ +70	1.800 ~ 50.000
F510LR	±100PPM	-40 ~ +85	1.800 ~ 50.000
F515L	±50PPM	-10 ~ +70	1.800 ~ 50.000
F515LR	±50PPM	-40 ~ +85	1.800 ~ 50.000
F516L	±25PPM	-10 ~ +70	1.800 ~ 50.000
F516LR	±25PPM	-40 ~ +85	1.800 ~ 50.000
F518L	±20PPM	-10 ~ +70	1.800 ~ 50.000

• ELECTRICAL CHARACTERISTICS

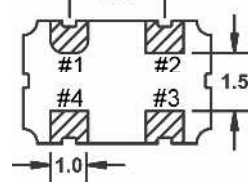
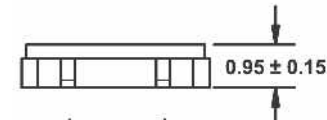
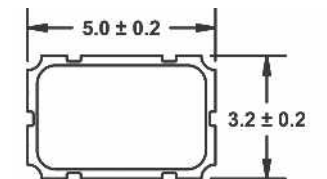
PARAMETERS	MAX (unless otherwise noted)
Frequency Range (Fo)	1.800 ~ 50.000 MHz
Storage Temperature Range (T _{STG})	-55°C ~ +125°C
Supply Voltage (V _{DD})	1.8V ± 5%
Input Current (I _{DD})	
1.800 ~ 32.100 MHz	7mA
32.100+ ~ 50.000 MHz	15mA
Output Symmetry (50% V _{DD})	40% ~ 60%
Rise Time (20% ~ 80% V _{DD}) (T _R)	
1.800 ~ 32.100 MHz	5nS
32.100+ ~ 50.000 MHz	3.5nS
Fall Time (80% ~ 20% V _{DD}) (T _F)	
1.800 ~ 32.100 MHz	5nS
32.100+ ~ 50.000 MHz	3.5nS
Output Voltage (V _{OL})	20% V _{DD}
(V _{OH})	80% V _{DD} Min
Output Current (I _{OL})	2mA Min
(I _{OH})	2mA Min
Output Load (HCMOS)	15pF
Standby Current	10μA
Start-up Time (T _s)	10mS
Output Disable Time ²	300nS
Output Enable Time ²	10mS

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

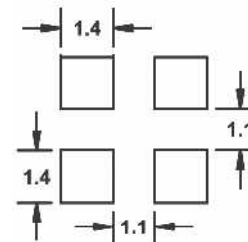
² An internal pullup resistor from pin 1 to pin 4 allows active output if pin 1 is left open.

See page 30 for mechanical specifications, test circuits, and output waveform.

All specifications subject to change without notice. Rev. 02/10/03



Recommended Solder Pad Layout



Pin Connections

#1 E/D #3 Output
#2 GND #4 V_{DD}

All dimensions are in millimeters.

• ENABLE / DISABLE FUNCTION

INH (Pin 1)	OUTPUT (Pin 3)
OPEN ²	ACTIVE
'1' Level V _{IH} ≥ 70% V _{DD}	ACTIVE
'0' Level V _{IL} ≤ 30% V _{DD}	High Z

See page 60 for tape and reel specifications.