

HCMOS/TTL CERAMIC SMD OSCILLATORS

F3160/F3165

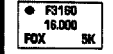
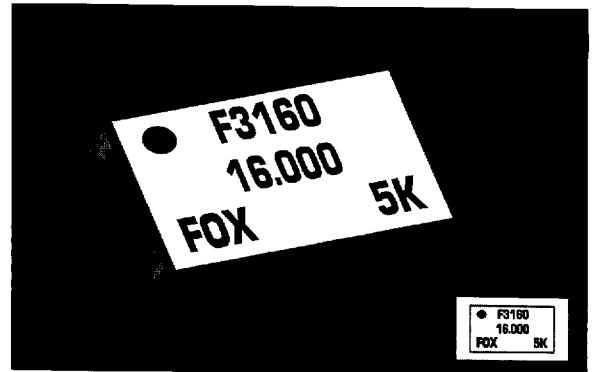
The Fox F3160 / F3165 are ceramic surface mount oscillators which can drive both HCMOS and TTL loads in high density applications such as notebook computers. This oscillator has compatible pin spacing (0.2" x 0.3") with other industry standards but features smaller overall dimensions.

FEATURES

- HCMOS/TTL
- Wide Frequency Range
- Industry Compatible Pinout
- Tri-state Enable/Disable
- Tape and Reel (1,000 pcs. STD)

• PART NUMBER SELECTION

Frequency Stability	Part Number	
±100PPM	F3160	F3165
+50PPM (F3170 up to 70 MHz)	F3170	F3175
±25PPM (up to 50 MHz)	F3171	-----



Actual Size

OSCILLATORS

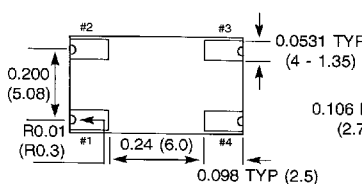
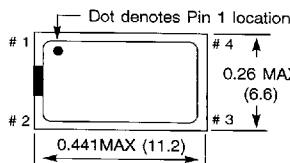
• ELECTRICAL CHARACTERISTICS (Ta = 25°C, VDD = 5.0V, CL = Max Load)

PARAMETERS	FREQUENCY RANGE	CONDITIONS	F3160		F3165		UNITS
			MIN	MAX	MIN	MAX	
Frequency Range (Fo)			1.800	80.000	1.800	50.000	MHz
Frequency Stability		All Conditions *	-100	+100	-100	+100	PPM
Temperature Range							
Operating (TOPR)	1.800 ~ 60.000		-10	+70	-10	+70	°C
Operating (TOPR)	60.000+ ~ 80.000		0	+70	0	+70	
Storage (TSTG)			-55	+125	-55	+125	
Supply Voltage (VDD)			+4.5	+5.5	+4.5	+5.5	V
Input Current (IDD)	1.800 ~ 25.000			25		20	mA
	25.000+ ~ 50.000			45		35	
	50.000+ ~ 70.000			60		---	
	70.000+ ~ 80.000			80		---	
Output Symmetry	1.800 ~ 70.000	2.5V	45	55	45	55	%
	70.000+ ~ 80.000		40	60	---	---	
Rise Time (TR)	1.800 ~ 50.000	0.5V to 4.5V				10	nS
	1.800 ~ 70.000	0.5V to 4.5V		7		---	
	70.000+ ~ 80.000			5		---	
Fall Time (TF)	1.800 ~ 50.000	4.5V to 0.5V				10	nS
	1.800 ~ 70.000	4.5V to 0.5V		7		---	
	70.000+ ~ 80.000			5		---	
Output Voltage (VOL) (VOH)	1.800 ~ 80.000	IOL = 16 mA / IOH = 4 mA IOH = -16 mA / IOH = -4 mA	4.5	0.5	4.5	0.5	V
Output Current (IOL) (IOH)	1.800 ~ 80.000	VOL = 0.5 V VOH = 4.5 V		16 -16		4 -4	mA
Output Load	1.800 ~ 80.000	TTL HCMOS		10 50		10LS 15	TTL pF
Start-up Time (TS)	1.800 ~ 80.000			10		10	mS
Enable/Disable Time	1.800 ~ 80.000			100		100	nS

* Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, aging, shock, and vibration.
 *** An internal pullup resistor from pin 1 to pin 4 allows active output if pin 1 is left open.
 See page 33 for environmental/mechanical specifications, test circuits, and output waveform.
 All specifications subject to change without notice. Rev. 10/1/96

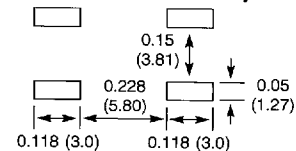
• ENABLE / DISABLE FUNCTION**

INH (Pin 1)	OUTPUT (Pin 3)
OPEN ***	ACTIVE
'1' Level VIH ≥ 2.2 V	ACTIVE
'0' Level VIL ≤ 0.8 V	High Z



Pin Connections
 #1 E/D** #3 Output
 #2 GND #4 5.0Vdc

Recommended Solder Pad Layout



Inch dimensions shall govern.
 All dimensions are in inches & parenthetically in millimeters.
 See page 58 for tape and reel specifications.

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