

HCMOS/TTL CERAMIC SMD OSCILLATORS

F3160/F3165

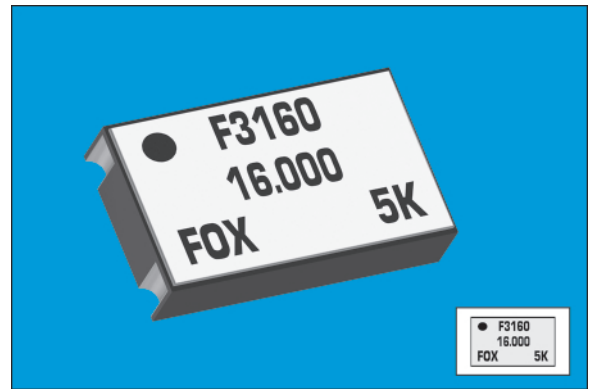
The Fox F3160 / F3165 are ceramic surface mount oscillators which can drive both HCMOS and TTL loads in high density applications such as notebook computers. This oscillator has compatible pin spacing (0.2" x 0.3") with other industry standards but features smaller overall dimensions.

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 (V_{DD} = 5.0V, C_L = Max Load)

PARAMETERS	FREQUENCY RANGE	CONDITIONS	F3160		F3165		UNITS
			MIN	MAX	MIN	MAX	
Frequency Range (F _o)			1.800	80.000	1.800	50.000	MHz
Frequency Stability		All Conditions *	-100	+100	-100	+100	PPM
Temperature Range							
Operating (T _{OPR})	1.800 ~ 80.000		-10	+70	-10	+70	°C
Storage (T _{STG})			-55	+125	-55	+125	
Supply Voltage (V _{DD})			+4.5	+5.5	+4.5	+5.5	V
Input Current (I _{DD})	1.800 ~ 25.000			25		20	mA
	25.000+ ~ 50.000			45		35	
	50.000+ ~ 70.000			76		---	
	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 (T _R)	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 (T _F)	1.800 ~ 50.000	4.5V to 0.5V		---		10	
	1.800 ~ 70.000	4.5V to 0.5V		7		---	
	70.000+ ~ 80.000			5		---	
Output Voltage (V _{OL})	1.800 ~ 80.000	I _{OL} = 16 mA / I _{OL} = 4 mA		0.5		0.5	V
(V _{OH})		I _{OH} = -16 mA / I _{OH} = -4 mA	4.5		4.5		
Output Current (I _{OL})	1.800 ~ 80.000	V _{OL} = 0.5 V		16		4	mA
(I _{OH})		V _{OH} = 4.5 V		-16		-4	
Output Load	1.800 ~ 80.000	TTL		10		10LS	TTL
		HCMOS		50		15	pF
Start-up Time (T _s)	1.800 ~ 80.000			10		10	mS
Enable/Disable Time	1.800 ~ 80.000			100		100	nS

• ENABLE / DISABLE FUNCTION**

INH (Pin 1)	OUTPUT (Pin 3)
OPEN ***	ACTIVE
'1' Level V _{IH} ≥ 2.2 V	ACTIVE
'0' Level V _{IL} ≤ 0.8 V	High Z

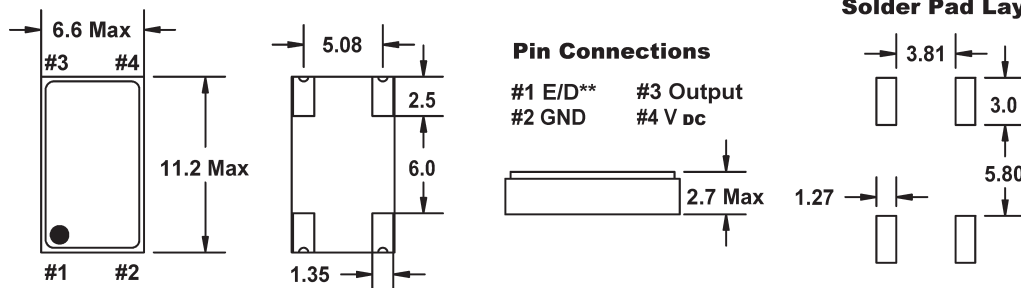
* Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, aging, shock, and vibration.

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

See page 35 for mechanical specifications, test circuits, and output waveform.

All specifications subject to change without notice. Rev. 5/20/98

Recommended Solder Pad Layout



All dimensions are in millimeters.
See page 64 for tape and reel specifications.