

# ULTRA MINIATURE SMD HCMOS/TTL OSCILLATORS

## F3400/F3410

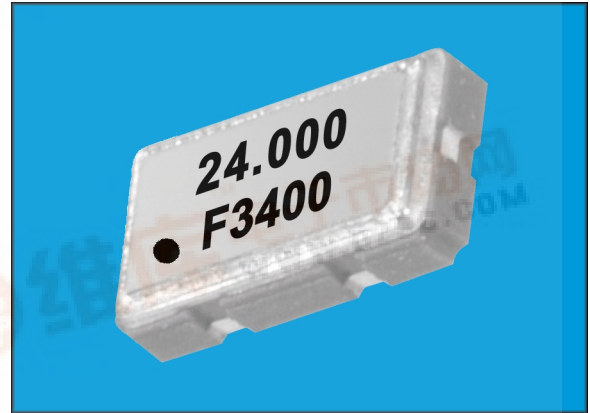
Fox introduces the F3400 series, our newest ultra miniature surface mount oscillator. This AT-strip design is housed in a 6.0 x 3.5 x 1.5mm ceramic package, providing one of the smallest footprints in the industry.

### FEATURES

- TTL / HCMOS
- Ultra Miniature Package
- Tri-state Enable/ Disable
- Tape & Reel (2,000 pcs. STD)

• MODEL NUMBER SELECTION		
Frequency Stability	Model Number	
±100PPM	F3400	F3410
±50PPM	F3405	F3415
±25PPM	F3406	F3416

Note: -40°C ~ +85°C "R" version available in 100 & 50 PPM (ex: F3400R)



### • ELECTRICAL CHARACTERISTICS (VDD = 5.0V, CL = Max Load)

PARAMETERS	FREQUENCY RANGE	CONDITIONS	F3400		F3410		UNITS
			MIN	MAX	MIN	MAX	
Frequency Range (Fo)			1.544	50.000	1.544	50.000	MHz
Frequency Stability	1.544 ~ 50.000	All Conditions*	-100	+100	-100	+100	PPM
Temperature Range							
Operating (TOPR)			-10	+70	-10	+70	°C
Storage (TSTG)			-30	+85	-30	+85	
Supply Voltage (VDD)			+4.5	+5.5	+4.5	+5.5	V
Input Current (IDD)	1.544 ~ 25.000 25.000+ ~ 50.000			25 40		13 24	mA
Output Symmetry	1.544 ~ 50.000	2.5V	40	60	40	60	%
Rise Time (Tr)	1.544 ~ 50.000	0.5V to 4.5V		5		10	nS
Fall Time (Tf)	1.544 ~ 50.000	4.5V to 0.5V		5		10	
Output Voltage (VOL) (VOH)	1.544 ~ 50.000	IOL = 16mA / IOH = 4mA IOH = -16mA / IOH = -4mA	4.5	0.5	4.5	0.5	V
Output Current (IOL) (IOH)	1.544 ~ 50.000	VOL = 0.5V VOH = 4.5V		16 -16		4 -4	mA
Output Load	1.544 ~ 50.000	TTL HCMOS		10 50		10LS 15	TTL pF
Start-up Time (Ts)	1.544 ~ 50.000			10		10	mS
Enable/Disable Time				100		100	nS

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

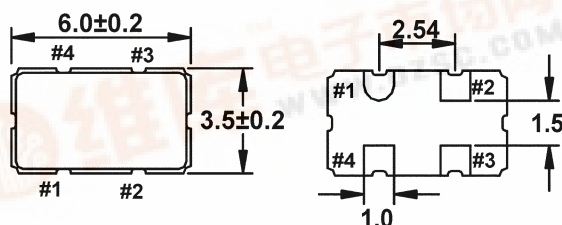
\*\*\* An internal pullup resistor from pin 1 to pin 4 allows active output if pin 1 is left open.

Note: A 0.01μF bypass capacitor should be placed between VDD (Pin 4) and GND (Pin 2) to minimize power supply line noise.

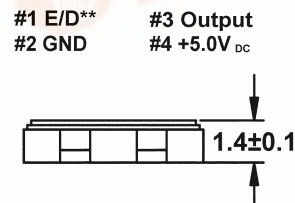
See page 44 for mechanical specifications, test circuits, and output waveform.

All specifications subject to change without notice. Rev. 03/02/00

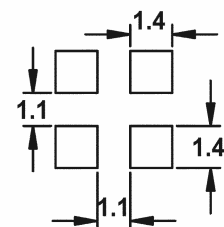
• ENABLE / DISABLE FUNCTION**	
INH (Pin 1)	OUTPUT (Pin 3)
OPEN ***	ACTIVE
'1' Level VIH ≥ 2.2 V	ACTIVE
'0' Level VIL ≤ 0.8 V	High Z



### Pin Connections



### Recommended Solder Pad Layout



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