

**Not Recommended for New Designs**

**ECS-8FX**  
SMD Clock Oscillator

Request a Sample



The ECS-8FMX (5V) and ECS-8FA3X (3.3V) are CMOS compatible, J-Leaded SMD oscillators. The 8F Series utilizes a low power CMOS IC in a cost effective package suitable for reflow soldering.

## OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

### ECS-8FX



- 5.0V and 3.3V Versions
- Extended Temperature Range
- RoHS Compliant
- Tape and Reel (1,000 pcs STD)

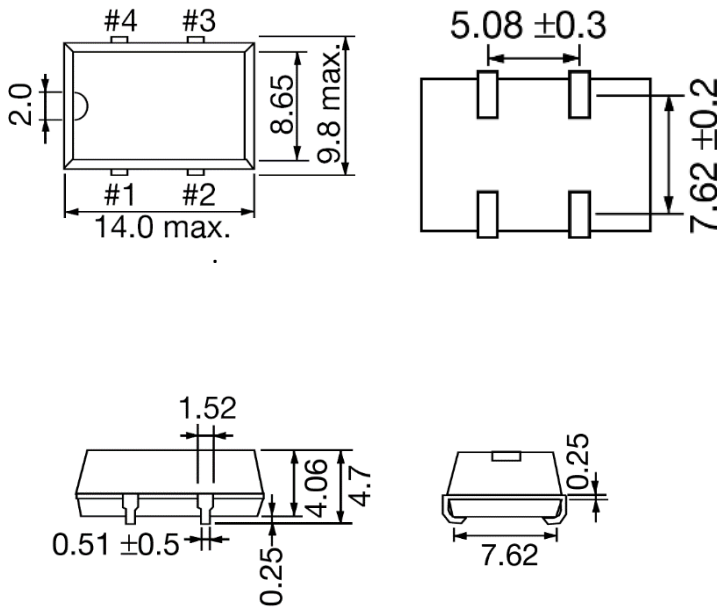
Parameters	Conditions	ECS-8FMX (+5V)			ECS-8FA3X (+3.3V)			Units
		MIN	TYP	MAX	MIN	TYP	MAX	
<b>Frequency Range</b>		1.000		80.000	1.000		80.000	MHz
<b>Temperature Range</b>	Operating	-40		+85	-40		+85	°C
	Storage	-55		+125	-55		+125	°C
<b>Supply Voltage</b>		+4.5	+5.0	+5.5	+3.0	+3.3	+3.6	VDC
<b>Frequency Tolerance*</b>	-10 ~ +70°C			±100			±100	PPM
	-40 ~ 85°C			±200			±200	PPM
<b>Input Current</b>	1.0 ~ 30.0 MHz			23			9	mA
	30.1 ~ 80.0 MHz			35			20	mA
<b>Output Symmetry</b>	@ ½ VCC Level	40/60		60/40	45/55		55/45	%
<b>Rise and Fall Times</b>	1.0 ~ 30.0 MHz			8			6	ns
	30.1 ~ 80.0 MHz			7			6	ns
<b>Output Voltage</b>	VOL			+0.5			+0.4	V
	VOH	VCC -0.5			VCC -0.4			V
<b>Output Load</b>	TTL			10				TTL
	CMOS			50			30	pF
<b>Start-up Time</b>	1.0 ~ 30.0 MHz			4			4	ms
	30.1 ~ 80.0 MHz			10			10	ms
<b>Enable/Disable Time</b>				100			100	ns

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

### Part Numbering Guide: Example ECS-8FMX-500-TR

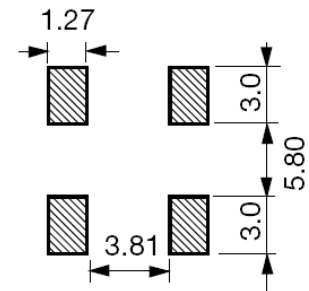
ECS	-	Series	-	Frequency Abbreviations	-	Packaging
ECS		8FMX = +5.0V 8FA3X = +3.3V		500 = 50 MHz		TR = Tape & Reel 1K/Reel

**Package Dimensions (mm)**



*Figure 1) Top, Side, and Bottom views*

Pin Connections	
#1	Tri-State
#2	Ground
#3	Output
#4	VCC



*Figure 2) Land Pattern*

Tri-State Control Voltage		
8FMX	8FA3X	Output
Pin 1	Pin 1	Pin 3
Open**	Open**	Oscillation
2V Min	2.4V Min	Oscillation
0.8 Max	0.6 Max	High Impedance

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