

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

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)

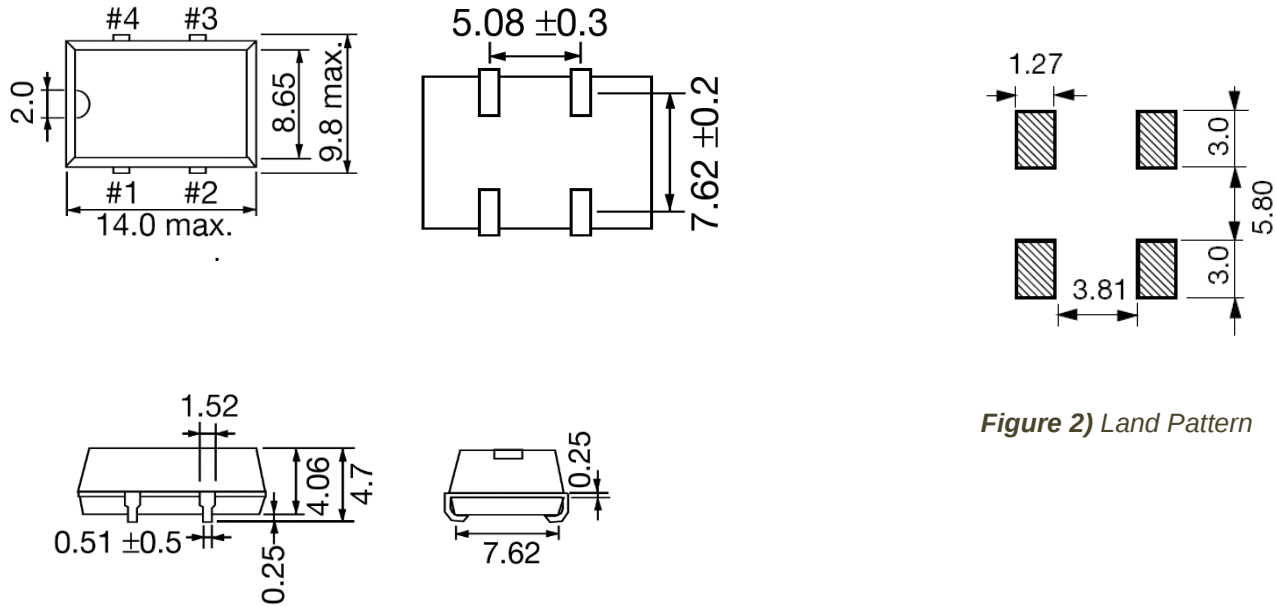


Figure 2) Land Pattern

Figure 1) Top, Side, and Bottom views

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

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.

Mouser Electronics

Authorized Distributor

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ECS:

[ECS-8FMX-666-TR](#) [ECS-8FA3X-036-TR](#) [ECS-8FA3X-081.92-TR](#) [ECS-8FA3X-098.3-TR](#) [ECS-8FA3X-100-TR](#) [ECS-8FA3X-110.5-TR](#) [ECS-8FA3X-112.896-TR](#) [ECS-8FA3X-120-TR](#) [ECS-8FA3X-122.8-TR](#) [ECS-8FA3X-143-TR](#) [ECS-8FA3X-160-TR](#) [ECS-8FA3X-163-TR](#) [ECS-8FA3X-184-TR](#) [ECS-8FA3X-200-TR](#) [ECS-8FA3X-245.7-TR](#) [ECS-8FA3X-250-TR](#) [ECS-8FA3X-270-TR](#) [ECS-8FA3X-400-TR](#) [ECS-8FA3X-480-TR](#) [ECS-8FA3X-500-TR](#) [ECS-8FMX-010-TR](#) [ECS-8FMX-018-TR](#) [ECS-8FMX-020-TR](#) [ECS-8FMX-024-TR](#) [ECS-8FMX-035-TR](#) [ECS-8FMX-036-TR](#) [ECS-8FMX-040-TR](#) [ECS-8FMX-041-TR](#) [ECS-8FMX-049-TR](#) [ECS-8FMX-050-TR](#) [ECS-8FMX-060-TR](#) [ECS-8FMX-073-TR](#) [ECS-8FMX-080-TR](#) [ECS-8FMX-098.3-TR](#) [ECS-8FMX-100-TR](#) [ECS-8FMX-110.5-TR](#) [ECS-8FMX-120-TR](#) [ECS-8FMX-122.8-TR](#) [ECS-8FMX-147.4-TR](#) [ECS-8FMX-160-TR](#) [ECS-8FMX-184-TR](#) [ECS-8FMX-196.6-TR](#) [ECS-8FMX-200-TR](#) [ECS-8FMX-221-TR](#) [ECS-8FMX-240-TR](#) [ECS-8FMX-245.7-TR](#) [ECS-8FMX-250-TR](#) [ECS-8FMX-251.7-TR](#) [ECS-8FMX-270-TR](#) [ECS-8FMX-283.2-TR](#) [ECS-8FMX-300-TR](#) [ECS-8FMX-320-TR](#) [ECS-8FMX-330-TR](#) [ECS-8FMX-400-TR](#) [ECS-8FMX-480-TR](#) [ECS-8FMX-491.5-TR](#) [ECS-8FMX-500-TR](#) [ECS-8FMX-1.8432-TR](#) [ECS-8FA3X-196.6-TR](#) [ECS-8FMX-666.66-TR](#) [ECS-8FMX-400-B-TR](#) [ECS-8FA3X-020.48-TR](#) [ECS-8FMX-020.48-TR](#) [ECS-8FMX-143-TR](#) [ECS-8FMX-015.44-TR](#) [ECS-8FMX-327.6-TR](#)