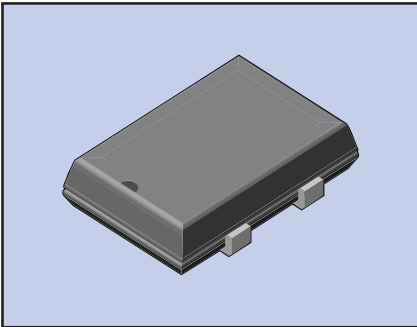


ECS-8F SERIES SMD CLOCK OSCILLATOR



The ECS-8FM (5V) and ECS-8FA3 (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.

FEATURES

- 5.0V & 3.3V versions
- Extended temperature range
- Tri-State function
- Tape and Reel (1,000 pcs STD)

PART NUMBERING GUIDE

	FREQUENCY (50.0 MHz)	TAPE AND REEL
ECS-8FM	500	TR

Sample Part Number: ECS-8FM-500-TR

OPERATING CONDITIONS/ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECS-8FM (5V)			ECS-8FA3 (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	V DC
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	@ 1/2 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.

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

PACKAGE DIMENSIONS (mm)

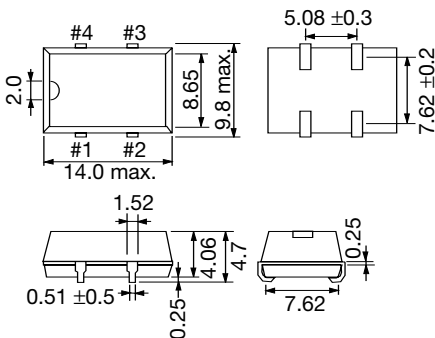


Figure 1) ECS-8F Top and Side view

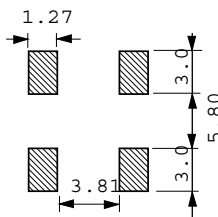


Figure 6) Land Pattern

PIN CONNECTIONS	
#1	TRI-STATE
#2	GND
#3	OUTPUT
#4	Vcc

TRI-STATE CONTROL VOLTAGE		
8FM	8FA3	OUTPUT
PIN 1	PIN 1	PIN 3
OPEN**	OPEN**	OSCILLATION
2V MIN	2.4V MIN	OSCILLATION
0.8 MAX	0.6 MAX	HIGH IMPEDANCE