

The ECS-3951M (5V) and ECS 3953M (3.3V) Series are miniature, crystal controlled, low current clock oscillators in a ceramic SMD package. Package is seam welded with a metal lid. The low profile package is ideal for today's advanced portable PC and instrumentation designs.

[Request a Sample](#)

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

ECS-3951M/3953M	Parameters	Conditions	ECS-3951M (5V)			ECS-3953M (3.3V)*			Units
			MIN	TYP	MAX	MIN	TYP	MAX	
	Frequency Range		1.800		125.0	1.800		125.0	MHz
	Temperature Range	Operating	-10		+70	-10		+70	°C
		Storage	-55		+125	-55		+125	°C
	Supply Voltage		+4.5	+5.0	+5.5	+3.0	+3.3	+3.6	V DC
	Frequency Stability**	Standard	-100	±40	+100	-100	±40	+100	PPM
		Option (B)	-50		+50	-50		+50	PPM
		Option (C)	-25		+25	-25		+25	PPM
	Input Current	1.8 ~ 36.0 MHz			20			15	mA
		36.0 ~ 70.0 MHz			55			25	mA
		70.0 ~ 100.0 MHz			60			30	mA
		100.0 ~ 125.0 MHz			65			30	mA
	Output Symmetry	@ ½ VCC Level	40/60	50±4	60/40	40/60	50±4	60/40	%
	Rise and Fall Times	1.8 ~ 70.0 MHz			15			5	nS
		70.0 ~ 125.0 MHz			5			5	nS
	Logic "0" Level	VCC x 0.1V max.							
	Logic "1" Level	VCC x 0.9V min.							
	Load	HCMOS			30			15	pF
	Start-Up Time	1.8 ~ 36.0 MHz			5			5	ms
		36.0 ~ 70.0 MHz			10			10	ms
		70.0 ~ 100.0 MHz			15			15	ms
	Output Current	(IOL) VOL=0.5V/0.33			4			4	mA
		(IOH) VOL=4.5V/2.97V			-4			-4	mA
	Enable/Disable Time				100			100	ns

*ECS-3953M is also compatible with a supply voltage of +3.0V DC ±0.3V

**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.

Note: A 0.01 µF bypass capacitor should be placed between VCC (Pin 4) and GND (Pin2) to minimize power line noise.

Part Numbering Guide: Example ECS-3951M-500-B-TR

ECS - Series - Frequency Abbreviations - Stability Tolerance - Temperature - Packaging

ECS

3951M +5V
3953M +3.3V

500 = 50 MHz

A = ±100 ppm
B = ±50 ppm
C = ±25 ppm
D = ±20 ppm

Blank = -10 ~ 70°C
M = -20 ~ +70°C
N = -40 ~ +85°C
U = -55 ~ +125°C

TR =
Tape & Reel
1K/Reel

Package Dimensions (mm)

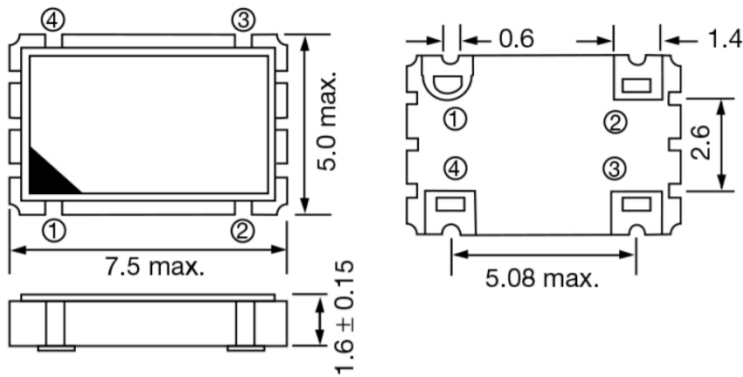


Figure 1) Top, Side, and Bottom views

Figure 2) Land Pattern

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

ECS-3951M/3953M Standby Control Voltage	
Pin #1 = Open***	#3 = Oscillation
Pin #1 = ±2.2V Min.	#3 = Oscillation
Pin #1 = 0.8V Max	#3 = High Impedance