

The ECS-3951M-BN(5V) and ECS-3953M-BN(3.3V) Series are miniature, crystal controlled, low current clock oscillators in a ceramic SMD package with an extended temperature range of -40 to +85°C with a frequency stability of ± 50 ppm.

**FEATURES**

- 3.3V or 5.0V Version
- Extended Temp Range
- Low Power Consumption
- Seam Welded Package
- Tape & Reel (1,000 pcs. STD)

**PART NUMBERING GUIDE**

SERIES	FREQUENCY (50.000 MHz)	STABILITY B = ± 50 ppm	TEMP RANGE N = -40 to +85°C
ECS-3951M	- 500	- B	N

Sample Part Number: ECS-3951M-500-BN

PARAMETERS	CONDITIONS	ECS-3951M-BN (5V)			ECS-3953M-BN(3.3V) *			UNITS
		MIN	TYP	MAX	MIN	TYP	MAX	
Frequency Range		1.8		125.0	1.800		125.0	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 Stability	Option (B)			± 50			± 50	ppm
Input Current	1.8 ~ 36.0 MHz			20			15	mA
	36.1 ~ 70.0 MHz			55			25	mA
	70.1 ~ 100.0 MHz			60			30	mA
	100.1 ~ 125.0 MHz			65			35	mA
Output Symmetry	at 1/2 Vcc Level	40/60		60/40	40/60		60/40	%
Rise and Fall Times	1.8 ~ 70.0 MHz			15			5	ns
	70.1 ~ 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 ~ 125.0 MHz			15			15	ms
Enable/Disable Time				100			100	ns

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

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

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

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

**PACKAGE DIMENSIONS (mm)**

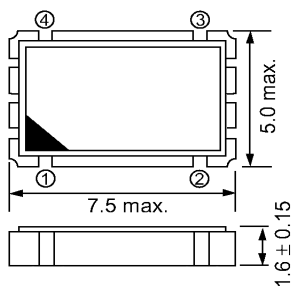


Figure 1) Top, Side, Bottom Views

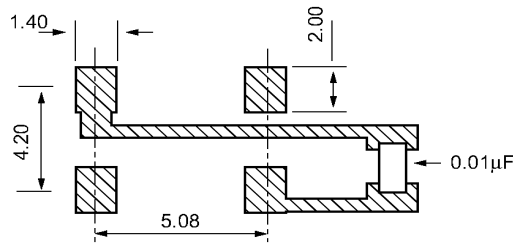
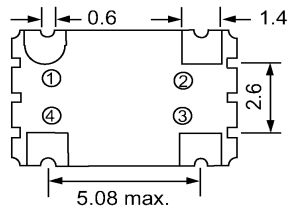


Figure 2) Land Pattern

Pin Connections	
#1	Tri-State ***
#2	Gnd
#3	Output
#4	Vcc