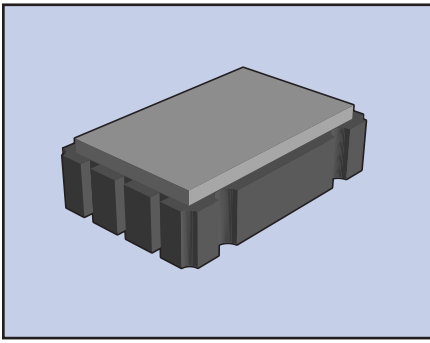


# ECS-3955M SERIES SMD CLOCK OSCILLATOR



The ECS-3955M (5V) is a high capacitive load version of our miniature, crystal controlled, low current clock oscillator in an all ceramic SMD package. The low profile package is ideal for PC's, portable applications and PCMCIA cards.

## FEATURES

- High capacitive load options
- Low power consumption
- Tri-State Function
- Seam welded package
- Tape & Reel (1,000 pcs STD)

## PART NUMBERING GUIDE

| PACKAGE TYPE | FREQUENCY (50.0 MHz) | STABILITY TOLERANCE (B=±50 PPM) |
|--------------|----------------------|---------------------------------|
| ECS-3955M    | - 500                | - B                             |

Sample Part Number: ECS-3955M-500-B

## OPERATING CONDITIONS/ELECTRICAL CHARACTERISTICS

| PARAMETERS           | CONDITIONS      | ECS-3955M (5V) |       |            | UNITS |
|----------------------|-----------------|----------------|-------|------------|-------|
|                      |                 | MIN            | TYP   | MAX        |       |
| FREQUENCY RANGE      |                 | 1.800          |       | 70.0       | MHz   |
| TEMPERATURE RANGE    | Operating       | -10            |       | +70        | °C    |
|                      | Storage         | -55*           |       | +125       | °C    |
| SUPPLY VOLTAGE       |                 | +4.5           | +5.0  | +5.5       | V DC  |
| FREQUENCY STABILITY* | Standard        |                |       | ±100       | PPM   |
|                      | Option (B)      |                |       | ±50        | PPM   |
|                      | Option (C)      |                |       | ±25        | PPM   |
| INPUT CURRENT        | 1.8 ~ 36.0 MHz  |                |       | 30         | mA    |
|                      | 36.1 ~ 70.0 MHz |                |       | 65         | mA    |
| OUTPUT SYMMETRY      | @ 1/2 Vcc Level | 40/60          | 50 ±4 | 60/40      | %     |
| RISE AND FALL TIMES  |                 |                | 7     |            | ns    |
| OUTPUT VOLTAGE       | VOL             |                |       | Vcc x 0.1V | V DC  |
|                      | VOH             | Vcc x 0.9V     |       |            | V DC  |
| LOAD                 | HCMOS           |                |       | 50         | pF    |
| START-UP TIME        | 1.8 ~ 36.0 MHz  |                |       | 5          | ms    |
|                      | 36.0 ~ 70.0 MHz |                |       | 10         | ms    |
| OUTPUT CURRENT (IOL) | VOL             |                |       | 16         | mA    |
|                      | (IOH)           | VOH            |       | -16        | mA    |
| ENABLE/DISABLE TIME  |                 |                | 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.

Note: A 0.01 μF bypass capacitor should be placed between VCC (Pin 4) and GND (Pin 2) to minimize power line noise.

## PACKAGE DIMENSIONS (mm)

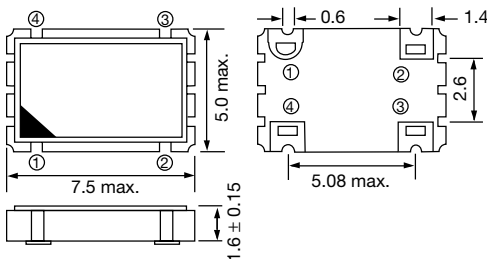


Figure 1) ECS-3955M Series Top, Side and Bottom Views

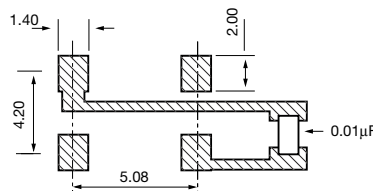


Figure 2) Land Pattern

| PIN CONNECTIONS |             |
|-----------------|-------------|
| #1              | TRI-STATE** |
| #2              | GND         |
| #3              | OUTPUT      |
| #4              | VCC         |

| ECS-3955M Standby Control Voltage |                     |
|-----------------------------------|---------------------|
| PIN #1 = OPEN                     | #3 = OSCILLATION    |
| PIN #1 = +2.2V MIN                | #3 = OSCILLATION    |
| PIN #1 = 0.8V MAX                 | #3 = HIGH IMPEDANCE |