

The ECS-100 clock oscillator is fully compatible with TTL circuitry. The metal package with pin #7 case ground acts as shielding to minimize radiation.

FEATURES

- 10 TTL output load
- Low cost
- Wide frequency range
- Industry standard footprint
- Resistance weld package
- 3.3V operation (optional)

PART NUMBERING GUIDE

| PART NUMBER * | FREQUENCY STABILITY |
|---------------|---------------------|
| ECS-100A | ±100 PPM |
| ECS-100B | ±50 PPM |
| ECS-100C | ±25 PPM |

* Complete part number to include frequency. i.e. ECS-100A-100 (100 = 10.000MHz)

OPERATING CONDITIONS/ELECTRICAL CHARACTERISTICS

| PARAMETERS | FREQUENCY RANGE | CONDITIONS | MINIMUM | TYPICAL | MAXIMUM | UNITS |
|---|--------------------|------------------|-------------------------|---------|---------|-----------------|
| FREQUENCY RANGE (f ₀) | 1.000 ~ 150.000 | | 1.000 | | 150.000 | MHz |
| OPERATING TEMP. RANGE (T _{OPR}) | 1.000 ~ 150.000 | | 0 | | +70 | °C |
| STORAGE TEMP. RANGE (T _{STG}) | 1.000 ~ 150.000 | | -55 | | +125 | °C |
| FREQUENCY STABILITY | 1.000 ~ 150.000 | All conditions* | -100 | | +100 | PPM |
| INPUT CURRENT (I _{DD}) | 1.000 ~ 7.999 | max. load | | | 15 | mA |
| | 8.000 ~ 23.999 | max. load | | | 30 | mA |
| | 24.000 ~ 69.999 | max. load | | | 70 | mA |
| | 70.000 ~ 150.000 | max. load | | | 80 | mA |
| OUTPUT SYMMETRY | 1.000 ~ 7.999 | 1.4V level | 45 | 50 ±3 | 55 | % |
| | 8.000 ~ 150.000 | 1.4V level | 40 | 50 ±3 | 60 | % |
| RISE TIME (T _R) | 1.000 ~ 24.999 | 0.4V ~ 2.4V | | | 10 | nS |
| | 25.000 ~ 69.999 | 0.5V ~ 2.4V | | | 5 | nS |
| | 70.000 ~ 150.000 | 0.5V ~ 2.4V | | | 4 | nS |
| FALL TIME (T _F) | 1.000 ~ 24.999 | 2.4V ~ 0.4V | | | 10 | nS |
| | 25.000 ~ 69.999 | 2.4V ~ 0.5V | | | 5 | nS |
| | 70.000 ~ 150.000 | 2.4V ~ 0.5V | | | 4 | nS |
| OUTPUT VOLTAGE | (V _{OL}) | 1.000 ~ 24.999 | I _{OL} = 20 mA | | 0.4 | V |
| | (V _{OL}) | 25.000 ~ 150.000 | I _{OL} = 20 mA | | 0.5 | V |
| | (V _{OH}) | 70.000 ~ 150.000 | I _{OH} = 1 mA | 2.4 | | V |
| OUTPUT CURRENT | (I _{OL}) | 1.000 ~ 150.000 | V _{OL} = 0.5 V | | 20 | mA |
| | (I _{OH}) | 1.000 ~ 150.000 | V _{OH} = 2.4 V | | 1.0 | mA |
| OUTPUT LOAD | 1.000 ~ 150.000 | | | | 10 | TTL |
| START-UP TIME (T _s) | 1.000 ~ 3.499 | | | | 20 | mS |
| | 3.500 ~ 3.999 | | | | 35 | mS |
| | 4.000 ~ 5.999 | | | | 30 | mS |
| | 6.000 ~ 19.999 | | | | 20 | mS |
| | 20.000 ~ 150.000 | | | | 15 | mS |
| SUPPLY VOLTAGE | 1.000 ~ 150.000 | +5.0 ±0.25 | | | - | V _{DC} |

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

PACKAGE DIMENSIONS (mm)

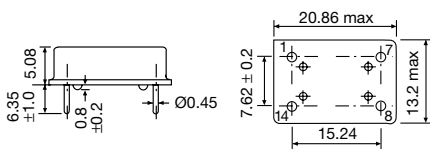


Figure 1) ECS-100 Series Side and Bottom views



Figure 2) Output Wave Form

| PIN CONNECTIONS | |
|-----------------|----------|
| #1 | NC |
| #7 | CASE GND |
| #8 | OUTPUT |
| #14 | +5 V DC |

Figure 3) Pin Connections