

The ECS-2100 Series clock oscillator offers low current drain and is compatible with HCMOS/TTL logic. The metal package with pin #7 case ground acts as a shielding to minimize radiation and conforms to FCC EMI specifications.

FEATURES

- HCMOS/TTL logic compatible
- Wide frequency range
- Low power consumption
- Resistance weld package
- 3.3V operation (optional)

PART NUMBERING GUIDE

| PART NUMBER * | FREQUENCY STABILITY |
|---------------|---------------------|
| ECS-2100A | ±100 PPM |
| ECS-2100B | ±50 PPM |
| ECS-2100C | ±25 PPM |

* Complete part number to include frequency, i.e. ECS-2100A-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 ~ 25.000 | | | 17 | 25 | mA |
| | 25.000 ~ 50.000 | | | 33 | 46 | mA |
| | 50.000 ~ 80.000 | | | 45 | 77 | mA |
| | 80.000 ~ 150.000 | | | 67 | 82 | mA |
| OUTPUT SYMMETRY | 1.000 ~ 80.000 | 50% V_{DD} level | 45 | 50 ±3 | 55 | % |
| | 80.000 ~ 150.000 | 50% V_{DD} level | 40 | 50 ±3 | 60 | % |
| RISE TIME (T_R) | 1.000 ~ 150.000 | 10% ~ 90% V_{DD} level | | | 5 | nS |
| FALL TIME (T_F) | 1.000 ~ 150.000 | 90% ~ 10% V_{DD} level | | | 5 | nS |
| OUTPUT VOLTAGE (V_{OL}) (V_{OH}) | 1.000 ~ 150.000 | $I_{OL} = 16$ mA | | | 0.5 | V |
| | 1.000 ~ 150.000 | $I_{OH} = -16$ mA | 4.5 | | | V |
| OUTPUT CURRENT (I_{OL}) (I_{OH}) | 1.000 ~ 100.000 | $V_{OL} = 0.5$ V | | | 16 | mA |
| | 1.000 ~ 150.000 | $V_{OH} = 4.5$ V | | | -16 | mA |
| OUTPUT LOAD | 1.000 ~ 150.000 | TTL | | | 10 | TTL |
| | 1.000 ~ 80.000 | HCMOS | | | 50 | pF |
| | 80.000 ~ 150.000 | HCMOS | | | 30 | pF |
| START-UP TIME (T_s) | 1.000 ~ 150.000 | 0.0V TO 5.0V | | | 10 | mS |
| SUPPLY VOLTAGE (V_{DC}) | | +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)

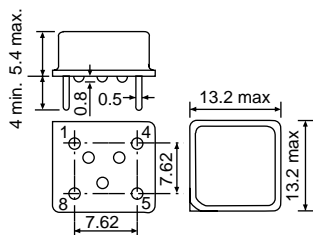


Figure 1) ECS-2100 Series - Side, Bottom and Top views

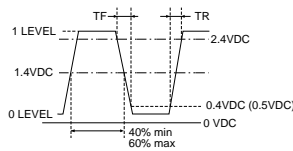


Figure 2) TTL Output Wave Form

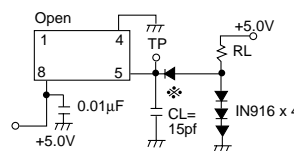


Figure 3) TTL Test Circuit

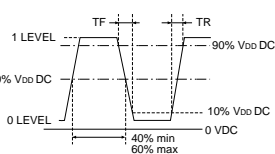


Figure 4) HCMOS Output Wave Form

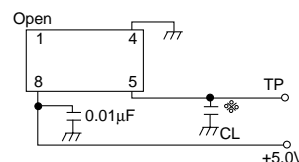


Figure 5) HCMOS Measurement Circuit ($C_L = 15$ pF)

| PIN CONNECTIONS | |
|-----------------|--------|
| #1 | NC |
| #4 | Ground |
| #5 | Output |
| #8 | +5V DC |

Mouser Electronics

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[ECS-2100A-147.4](#)