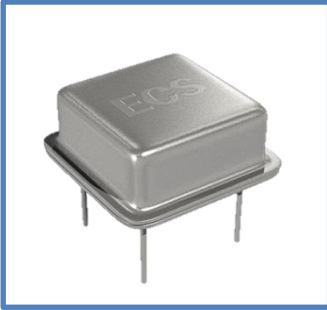


The ECS-2200X Series clock oscillator can drive both HCMOS and TTL logic. This oscillator also features tri-state enable/disable capabilities in an 8 pin DIP package

Request a Sample

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

ECS-2200X



- 50 pF HCMOS/TTL logic
- Tri-State enable/disable
- Wide frequency range
- Resistance weld package
- 3.3V operation (optional)
- PbFree/RoHS Compliant

| Parameters | Frequency Range | Conditions | MIN | TYP | MAX | Units |
|--|------------------|---------------------------------|-------|--------|---------|-----------------|
| Frequency (F _O) | 1.000 ~ 150.000 | | 1.000 | | 150.000 | MHz |
| Operating Temperature Range (T _{OPR}) | 1.000 ~ 150.000 | | 0 | | +70 | °C |
| Storage Temperature 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 ~ 150.000 | V _{OL} = 0.5V | | | 16 | mA |
| | 1.000 ~ 150.000 | V _{OH} = 4.5V | | | -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 | | | +4.75 | +5.0 | +5.25 | V _{DC} |

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

Part Numbering Guide: Example ECS-2200AX-100

ECS - Series - Stability - Frequency Abbreviations

ECS

2200
+5V HCMOS/TTL
Half Size w/Tri-
State

AX = ±100 PPM
BX = ±50 PPM
CX = ±25 PPM

100 = 10.000 MHz

Package Dimensions (mm)

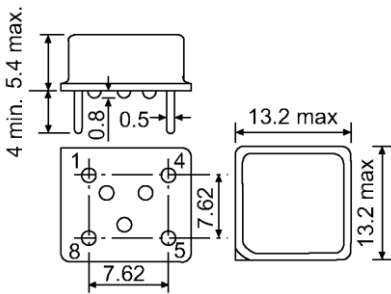


Figure 1) Side, Bottom, and Top views

| Pin Connections | |
|-----------------|-------------|
| #1 | TRI-STATE |
| #4 | CASE GROUND |
| #5 | OUTPUT |
| #8 | +5V DC |

| Enable/ Disable Function** | |
|---|----------------|
| $\overline{\text{INH}}$ (Pin 1) | Output (Pin 5) |
| Open* | Active |
| 1 Level $V_{IH} \geq 2.2V$ ($V_{IH} \geq 2.0V$ Above 70 MHz) | Active |
| 'O' Level $V_{IL} \leq 0.8V$ | High Z |

** An internal pullup resistor from pin 1 to pin 8 allows active output if pin 1 is left open.

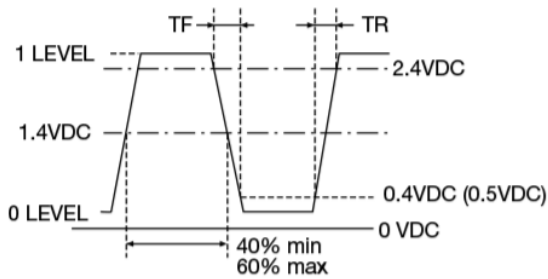


Figure 2) TTL Output Wave Form

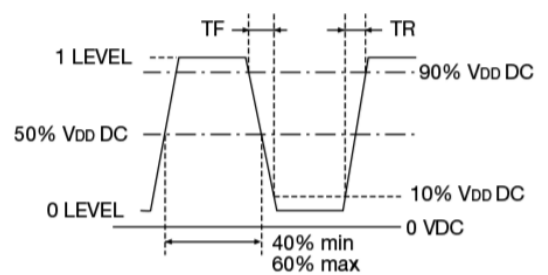


Figure 3) HCMOS Output Wave Form