

The ECS-P143X (3.3V) and ECS-P145X (5V) 14 pin DIP is a programmable crystal controlled oscillator. The standard 14 pin DIP footprint is ideal for existing PC boards.

[Request a Sample](#)

### OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

#### ECS-P143X/P145X



- Programmable (1 Time)
- 3.3V and 5V Options
- PLL Technology
- 14 pin DIP footprint
- Extended temp range
- PbFree/RoHS Compliant

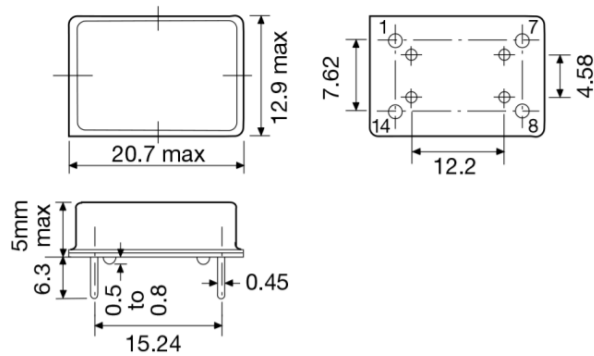
| Parameters                   | Conditions          | ECS-P143X (+3.3V) |      |         | ECS-P145X (+5V) |      |         | Units |
|------------------------------|---------------------|-------------------|------|---------|-----------------|------|---------|-------|
|                              |                     | MIN               | TYP  | MAX     | MIN             | TYP  | MAX     |       |
| <b>Frequency Range</b>       |                     | 1.000             |      | 125.000 | 1.000           |      | 150.000 | MHz   |
| <b>Operating Temperature</b> | Standard            | 0                 |      | +70     | 0               |      | +70     | °C    |
|                              | Extended (N Option) | -40               |      | +85     | -40             |      | +85     | °C    |
| <b>Storage Temperature</b>   |                     | -55               |      | +125    | -55             |      | +125    | °C    |
| <b>Frequency Stability*</b>  | Option A            |                   |      | ±100    |                 |      | ±100    | PPM   |
|                              | Option B            |                   |      | ±50     |                 |      | ±50     | PPM   |
| <b>Input Voltage (VCC)</b>   |                     | +2.97             | +3.3 | +3.63   | +4.5            | +5.0 | +5.5    | VDC   |
| <b>Input Current</b>         |                     |                   |      | 28      |                 |      | 45      | mA    |
| <b>Output Symmetry</b>       | @ ½ VCC Level       | 40/60             |      | 60/40   | 40/60           |      | 60/40   | %     |
| <b>Rise and Fall Times</b>   | 20% VCC to 80% VCC  |                   |      | 4       |                 |      | 4       | ns    |
| <b>Jitter</b>                | 1.0 ~ 33.0 MHz      |                   | ±100 | ±250    |                 | ±100 | ±250    | pS    |
|                              | > 33.1 MHz          |                   | ±50  | ±100    |                 | ±50  | ±100    | pS    |
| <b>“0” Level</b>             |                     |                   |      | 0.4     |                 |      | 0.4     | VDC   |
| <b>“1” Level</b>             |                     | 2.7               |      |         | VCC-0.5         |      |         | VDC   |
| <b>Load HCMOS</b>            | 1.0 ~ 50.0 MHz      |                   |      | 30      |                 |      | 50      | pF    |
|                              | > 50.1 MHz          |                   |      | 15      |                 |      | 15      | pF    |
| <b>Enable/Disable Time</b>   |                     |                   |      | 150     |                 |      | 100     | ns    |
| <b>Start-up Time</b>         |                     |                   |      | 10      |                 |      | 10      | ms    |

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

### Part Numbering Guide: Example ECS-P143X-16.312-AN

| ECS | Series                         | Frequency MHz       | Stability                   | Temperature Range                    |
|-----|--------------------------------|---------------------|-----------------------------|--------------------------------------|
| ECS | P143X = +3.3V<br>P145X = +5.0V | 16.312 = 16.312 MHz | A = ±100 PPM<br>B = ±50 PPM | Blank = 0 ~ +70°C<br>N = -40 ~ +85°C |

**Package Dimensions (mm)**



*Figure 1) Top, Side, and Bottom views*

| ECS-P83X (3.3V) Tri-State Control Voltage |                     |
|---|---------------------|
| Pin #1 = Open                             | #5 = Output         |
| Pin #1 = +0.7V Min                        | #5 = Output         |
| Pin #1 = +0.2V Max                        | #5 = High Impedance |

| ECS-P85X (5V) Tri-State Control Voltage |                     |
|---|---------------------|
| Pin #1 = Open                           | #5 = Output         |
| Pin #1 = +2.0V Min                      | #5 = Output         |
| Pin #1 = +0.8V Max                      | #5 = High Impedance |

| Pin Connections |           |
|-----------------|-----------|
| #1              | Tri-State |
| #2              | Ground    |
| #3              | Output    |
| #4              | VCC       |