

# CFPP-72, -73

ISSUE 5; 21 JULY 2005

## Delivery Options

- 48 hour fast make service available. Please contact our sales office for details

## Output Compatibility

- Tri-state HCMOS/TTL (5.0V) (CFPP-72, -72I)

| Maximum Capacitive Load for: |      |
|------------------------------|------|
| TTL $\leq$ 40.0MHz           | 50pF |
| TTL $>$ 40.0 to 150.0MHz     | 25pF |
| HCMOS $\leq$ 66.0MHz         | 50pF |
| HCMOS $>$ 66.0 to 150.0MHz   | 25pF |

- Tri-state HCMOS (3.3V) (CFPP-73, -73I)

| Maximum Capacitive Load for: |      |
|------------------------------|------|
| HCMOS $\leq$ 40.0MHz         | 30pF |
| HCMOS $>$ 40.0 to 133.0MHz   | 15pF |

## Package Outline

- OneTime Factory Programmable PLL crystal oscillator in a SMD (surface mount device) ceramic package

## Standard Frequency Stabilities

- $\pm 25$ ppm,  $\pm 50$ ppm,  $\pm 100$ ppm (inclusive of supply voltage & output load variations over the operating temperature range)

## Operating Temperature Range

- 0 to 70°C (CFPP-72, -73)
- 40 to 85°C (CFPP-72I, -73I)

## Storage Temperature Range

- 55 to 125°C

## Tri-state Operation

- Logic '1' to pad 1 enables oscillator output
- Logic '0' to pad 1 disables oscillator output; when disabled the oscillator output goes to the high impedance state
- No connection to pad 1 enables oscillator output

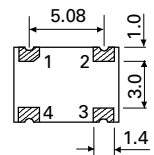
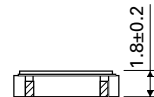
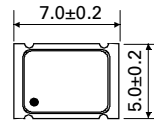
## Marking

- Model number (+ Operating Temperature Code; if applicable, + Frequency Stability Code)
- Frequency

## Minimum Order Information Required

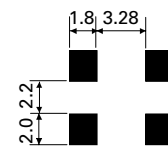
- Frequency + Model Number + Operating Temperature Code (if applicable) + Frequency Stability

## Outline in mm



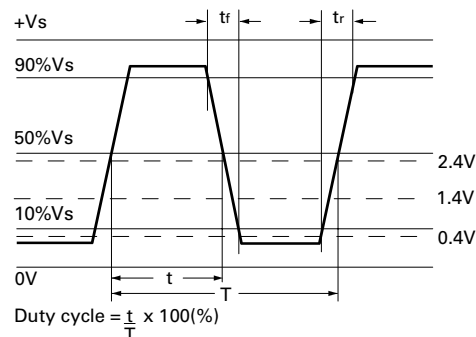
## Pad Connections

- N/C or Enable/Disable
- GND
- Output
- +Vs



Solder pad layout

## Output Waveform



## Solder Conditions

- For typical soldering conditions, please see relevant page in Application Notes

Electrical Specifications - maximum limiting values when measured in HCMOS test circuit.

| Frequency Range      | Frequency Stability                                           | Supply Voltage   | Supply Current (unloaded) | Rise Time(tr) | Fall Time(tf) | Duty Cycle (CMOS) | Model Number  |
|----------------------|---------------------------------------------------------------|------------------|---------------------------|---------------|---------------|-------------------|---------------|
| 1.0 to 40.0MHz       | $\pm 25\text{ppm}$ , $\pm 50\text{ppm}$ , $\pm 100\text{ppm}$ | 5.0V $\pm 0.5\%$ | 45mA                      | 4ns           | 4ns           | 45/55%            | CFPP-72, -72I |
|                      |                                                               | 3.3V $\pm 0.5\%$ | 25mA                      | 4ns           | 4ns           | 45/55%            | CFPP-73, -73I |
| >40.0 to 66.0MHz     | $\pm 25\text{ppm}$ , $\pm 50\text{ppm}$ , $\pm 100\text{ppm}$ | 5.0V $\pm 0.5\%$ | 45mA                      | 4ns           | 4ns           | 45/55%            | CFPP-72, -72I |
|                      |                                                               | 3.3V $\pm 0.5\%$ | 25mA                      | 4ns           | 4ns           | 40/60%            | CFPP-73, -73I |
| >66.0MHz to 100.0MHz | $\pm 25\text{ppm}$ , $\pm 50\text{ppm}$ , $\pm 100\text{ppm}$ | 5.0V $\pm 0.5\%$ | 45mA                      | 4ns           | 4ns           | 40/60%            | CFPP-72, -72I |
|                      |                                                               | 3.3V $\pm 0.5\%$ | 25mA                      | 4ns           | 4ns           | 40/60%            | CFPP-73, -73I |
| >100.0 to 133.0MHz   | $\pm 25\text{ppm}$ , $\pm 50\text{ppm}$ , $\pm 100\text{ppm}$ | 5.0V $\pm 0.5\%$ | 45mA                      | 4ns           | 4ns           | 40/60%            | CFPP-72, -72I |
|                      |                                                               | 3.3V $\pm 0.5\%$ | 45mA                      | 4ns           | 4ns           | 40/60%            | CFPP-73, -73I |
| >133.0 to 150.0MHz   | $\pm 25\text{ppm}$ , $\pm 50\text{ppm}$ , $\pm 100\text{ppm}$ | 5.0V $\pm 0.5\%$ | 60mA                      | 4ns           | 4ns           | 40/60%            | CFPP-72, -72I |

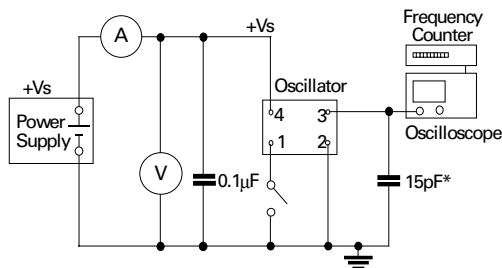
  

|                                                                                                                                                                                                                                                 |  |  |  |         |         |   |   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|---------|---------|---|---|
| <b>Ordering Example</b><br>Frequency _____<br>Model Number _____<br>Operating Temperature Code: I = -40 to 85°C; Not applicable for 0 to 70°C<br>Frequency Stability: A = $\pm 25\text{ppm}$ , B = $\pm 50\text{ppm}$ , C = $\pm 100\text{ppm}$ |  |  |  | 20.0MHz | CFPP-72 | I | C |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|---------|---------|---|---|

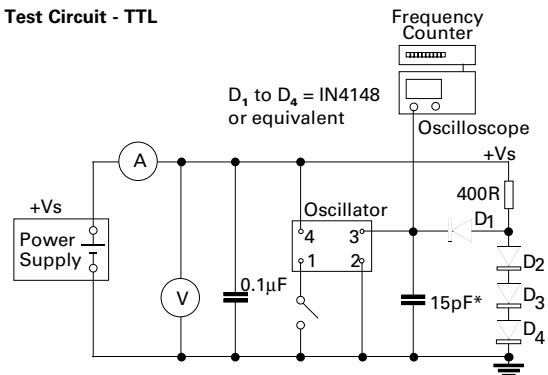
|                        |          |                    |          |
|------------------------|----------|--------------------|----------|
| Jitter pk-pk (typical) |          | Jitter pk-pk (max) |          |
| 1.0 to 33.0MHz         | >33.0MHz | 1.0 to 33.0MHz     | >33.0MHz |
| 100ps                  | 75ps     | 250ps              | 175ps    |

Test Circuit - HCMOS



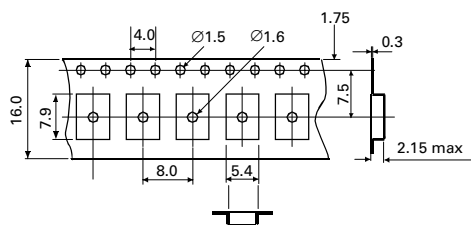
\*Inclusive of jigging & equipment capacitance

Test Circuit - TTL



\*Inclusive of jigging & equipment capacitance

Outline in mm - Tape



Outline in mm - Reel

