

Helping Customers Innovate, Improve & Grow


PX-422
Features

- Frequency: 1 to 80 MHz
- 40-Pad Leadless Chip Carrier (LCC)
- Package equivalent of MIL-PRF-55310/19
- Surface Mount, Low Profile
- Output Option: ACMOS, TTL
- No Pure Tin is used in this product
- High Shock Survival up to 20Kg
- Previous Model: CO-408, CO-448, MC075
- Made in USA
- ECCN: EAR99

Applications

- Low Voltage Clock Applications
- Avionics and Instrumentation
- Test and Measurement Equipment
- Navigation

Performance Specifications

| Parameter | Min | Typ | Max | Units | Condition |
|--|------|------|------|-------|---------------|
| Frequency Stabilities¹ | | | | | |
| vs. operating temperature range (referenced to +25°C) | -15 | | +15 | ppm | 0... +70°C |
| | -25 | | +25 | ppm | |
| | -50 | | +50 | ppm | |
| | -100 | | +100 | ppm | |
| | -25 | | +25 | ppm | |
| -50 | | +50 | ppm | | |
| -100 | | +100 | ppm | | |
| | -50 | | +50 | ppm | -55... +85°C |
| | -100 | | +100 | ppm | |
| | -50 | | +50 | ppm | -55... +105°C |
| | -100 | | +100 | ppm | |
| | -50 | | +50 | ppm | -55... +125°C |
| | -100 | | +100 | ppm | |
| Initial tolerance | -15 | | +15 | ppm | @+25°C |
| | -25 | | +25 | ppm | |
| | -50 | | +50 | ppm | |
| | -100 | | +100 | ppm | |

Performance Specifications

| Parameter | Min | Typ | Max | Units | Condition |
|--|-------|------|--------------------|----------------------|---|
| Overall tolerance (Referenced to +25°C) (includes operating temperature and initial accuracy) | -20 | | +20 | ppm | 0... +70°C |
| | -25 | | +25 | ppm | |
| | -50 | | +50 | ppm | |
| | -100 | | +100 | ppm | |
| | -25 | | +25 | ppm | -40... +85°C |
| | -50 | | +50 | ppm | |
| | -100 | | +100 | ppm | |
| | -50 | | +50 | ppm | -55... +85°C |
| | -65 | | +65 | ppm | |
| | -100 | | +100 | ppm | |
| -50 | | +50 | ppm | -55... +105°C | |
| -65 | | +65 | ppm | | |
| -100 | | +100 | ppm | | |
| -65 | | +65 | ppm | -55... +125°C | |
| -80 | | +80 | ppm | | |
| -100 | | +100 | ppm | | |
| vs. supply voltage change | -2 | | +2 | ppm | VS ± 5% Load ± 5% after 30 days of operation |
| vs. load change | -1 | | +1 | ppm | |
| vs. aging / 1st year | -3 | | +3 | ppm | |
| vs. aging / year (following years) | -1 | | +1 | ppm | |
| Supply Voltage (Vs) | | | | | |
| Supply voltage | 4.75 | 5.0 | 5.25 | VDC | |
| Supply voltage | 3.135 | 3.3 | 3.465 | VDC | |
| Current consumption (+5 VDC) | | | 15 20 40 | mA mA mA | ACMOS or TTL 1.0 to 23.9 MHz ACMOS or TTL 24 to 49.9 MHz ACMOS or TTL 50 to 80.00 MHz |
| Current consumption (+3.3 VDC) | | | 6 8 12 16 | mA mA mA mA | ACMOS 1.0 to 14.9 MHz ACMOS 15.0 to 39.9 MHz ACMOS 40.0 to 59.9 MHz ACMOS 60.0 to 80.0 MHz |

Performance Specifications

| Parameter | Min | Typ | Max | Units | Condition |
|--|--------------|-----|------------|------------|---|
| RF Output | | | | | |
| Signal | ACMOS | | | | |
| Load | | 15 | | pF | |
| Signal Level (Vol) | | | 0.5 0.3 | VDC VDC | with Vs=5.0V and 15pF load with Vs=3.3V and 15pF load |
| Signal Level (Voh) | 4.5 3.0 | | | VDC VDC | with Vs=5.0V and 15pF load with Vs=3.3V and 15pF load |
| Rise and fall times for ACMOS (measured 10% to 90%) | | | 10 6 | ns ns | 1.0 to 23.9 MHz and 15pF load 24.0 to 80.0 MHz and 15pF load |
| Duty cycle | 45 40 | | 55 60 | % % | @ 50% < 15 MHz @ 50% => 15 MHz |
| Signal | TTL | | | | |
| Load | | | 10 | TTL | |
| Signal Level (Vol) | | | 0.4 | VDC | |
| Signal Level (Voh) | +2.4 | | | VDC | |
| Rise and fall times for TTL (measured 0.8V to 2.0V) | | | 5 3 | ns ns | 1.0 to 23.9 MHz 24.0 to 125 MHz |
| Duty cycle | 45 40 | | 55 60 | % % | @ 1.4V < 15 MHz @ 1.4V >= 15 MHz |
| Parameter | Min | Typ | Max | Units | Condition |
| Absolute Maximum Ratings | | | | | |
| Supply voltage (Vs) | | | 7.0 | V | with Vs = 5.0VDC and 3.3VDC |
| Operable temperature range | -55 | | +125 | °C | |
| Storage temperature range | -62 | | +125 | °C | |

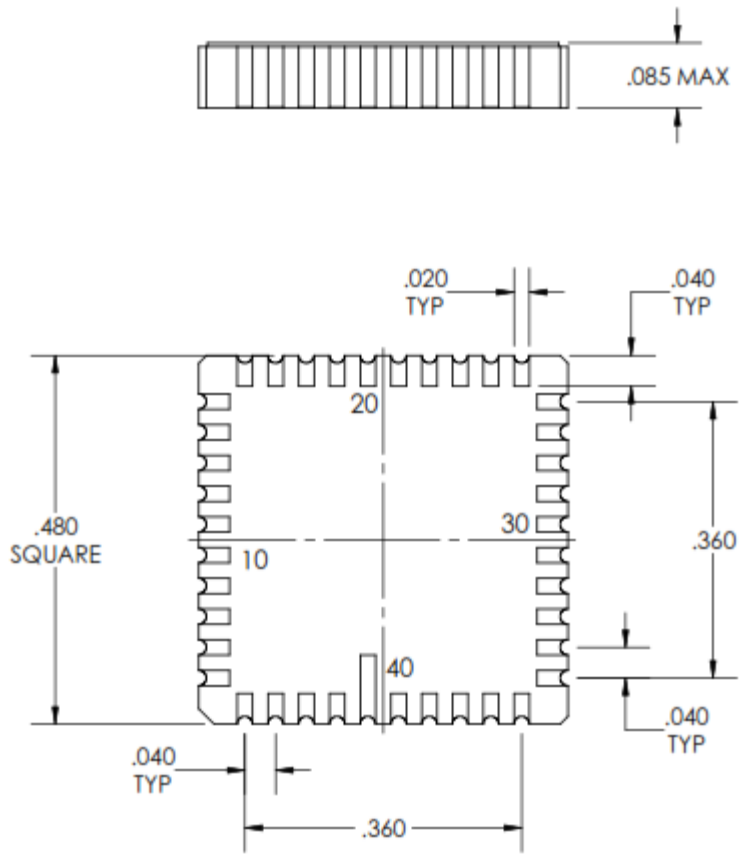
Additional Parameters

| | |
|-----------|------------------------|
| Screening | Vectron Verification |
| | Class B, MIL-PRF-55310 |

Standard Environmentals

| | |
|----------------------------|---|
| Vibration | MIL-STD-202, Method 204, Condition D (20 G, 10Hz-2000Hz) |
| Shock | MIL-STD-202, Method 213, Condition I (100 G, 6ms, Sawtooth) |
| Acceleration | MIL-STD-883, Method 2001, Condition A (5000 G, Y1 Plane) |
| Temperature Cycling | MIL-STD-883, Method 1010, Condition B |
| Thermal Shock | MIL-STD-883, Method 107, Condition B |
| Solderability | MIL-STD-202, Method 208 |
| Leak Test (Fine and Gross) | MIL-STD-883, Method 1014, Condition A1 and C1 |

Outline Drawing / Enclosure



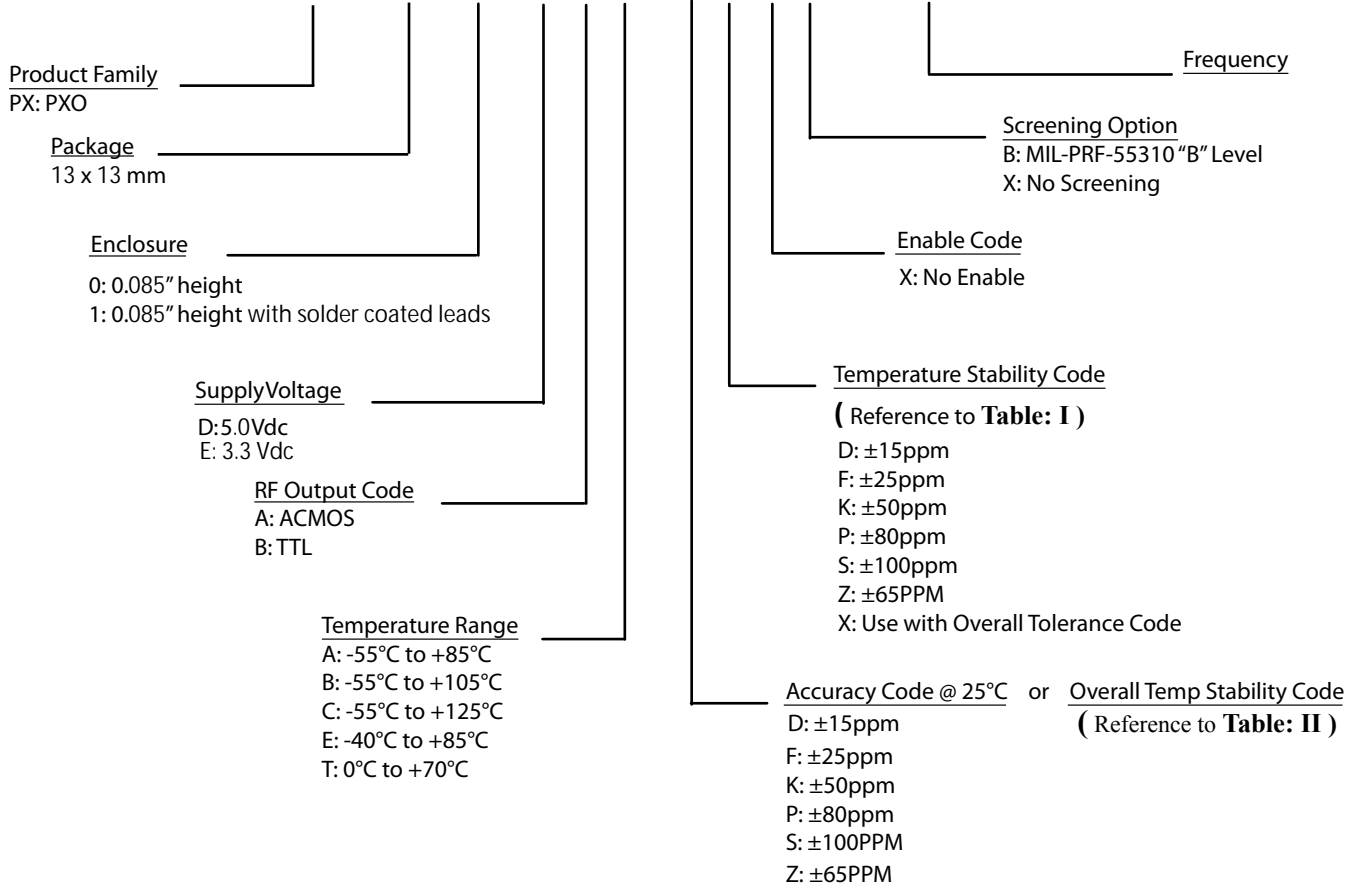
Dimensions in inches

| Height | | |
|--------|------------|----------------|
| Code | Height "H" | Pin Length "L" |
| 0 | 0.085 | NA |

| Pin Connections | |
|-----------------|--|
| 4 | Supply |
| 10 | Supply |
| 31 | Ground |
| 37 | Ground |
| 39 | Output |
| others | all others have no internal connection |

Ordering Information

PX - 422 0 - D A T - F K X B - 10M000000



| Available Temperature Stability Code | |
|--------------------------------------|----------------|
| Temp Range | Temp Stability |
| A: -55°C to +85°C | K: ± 50ppm |
| B: -55°C to +105°C | Z ± 65ppm |
| | P ± 80ppm |
| C: -55°C to +125°C | S ± 100ppm |
| E: -40°C to +85°C | F: ± 25ppm |
| | K: ± 50ppm |
| | Z ± 65ppm |
| | P ± 80ppm |
| T: 0°C to +70°C | S ± 100ppm |
| | D: ± 15ppm |
| | F: ± 25ppm |
| | K: ± 50ppm |
| | Z ± 65ppm |
| | P ± 80ppm |
| | S ± 100ppm |

Table: I

| Available Overall Tolerance Code | | |
|----------------------------------|-------------------|----------------|
| Temp Range | Overall Tolerance | Temp Stability |
| A: -55°C to +85°C | Z: ± 65ppm | X |
| B: -55°C to +105°C | P: ± 80ppm | X |
| | S: ± 100ppm | X |
| C: -55°C to +125°C | K: ± 50ppm | X |
| | Z: ± 65ppm | X |
| | P: ± 80ppm | X |
| | S: ± 100ppm | X |
| E: -40°C to +85°C | F: ± 25ppm | X |
| | K: ± 50ppm | X |
| | Z: ± 65ppm | X |
| | P: ± 80ppm | X |
| | S: ± 100ppm | X |
| T: 0°C to +70°C | F: ± 25ppm | X |
| | K: ± 50ppm | X |
| | Z: ± 65ppm | X |
| | P: ± 80ppm | X |
| | S: ± 100ppm | X |

Table: II

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Notes:

1. Contact factory for improved stabilities or additional product options. Not all options and codes are available at all frequencies.
2. Subject to technical modification.
3. Contact factory for custom requirements.

For Additional Information, Please Contact

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