

Crystek Corporation

Oven Controlled Crystal Oscillator OCXO

Part Number: CO27VH15DE-02-10.000

HCMOS Output

Applications

- Base Stations
- RF Sources

Features

- High Stability
- Excellent Phase Noise
- AT-Cut Crystal



| FREQUENCY STABILITIES | MIN | TYP | MAX | UNITS | CONDITIONS |
|--------------------------------|------|-----|------|---------|---------------------------------------|
| Frequency vs Operating Temp | -200 | | +200 | PPB | -20° to +80°C (referenced to 25°C) |
| Frequency vs 5 years aging | -500 | | +500 | PPB | |
| Frequency vs 10 years aging | -700 | | +700 | PPB | -20° to +80°C |
| Warm-up Time to within ±200ppb | | | 3.00 | Minutes | @ +25°C |

| Supply Voltage / Current | MIN | TYP | MAX | UNITS | CONDITIONS |
|--------------------------|-----|-----|-----|-------|----------------|
| Supply Voltage | +14 | +15 | +16 | VDC | |
| Supply Current | | | 300 | mA | During Warm-up |
| | | | 110 | mA | Steady State |

| HCMOS OUTPUT | MIN | TYP | MAX | UNITS | CONDITIONS |
|--------------------|-----|-----|-----|-------|---------------|
| Signal Level (Voh) | 4.5 | | | VDC | |
| Signal Level (Vol) | | | 0.5 | VDC | |
| Duty Cycle | 45 | | 55 | % | @ (Voh-Vol)/2 |
| Load | | 15 | | pF | |

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| FREQUENCY TUNING | MIN | TYP | MAX | UNITS | CONDITIONS |
|------------------|----------|-----|------|-------|--------------------|
| Tuning Range | ±1 | | ±1.5 | PPM | Over Control Range |
| Control Range | 0 | 5 | 10 | VDC | |
| Input Resistance | 50K | | | Ω | |
| Slope | POSITIVE | | | | |
| Linearity | | | 10 | % | |
| Setability @ MHz | 4 | 5 | 6 | VDC | |

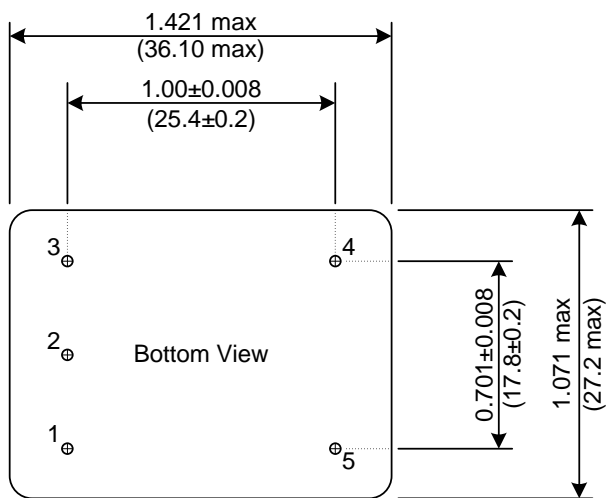
| OUTPUT CHARACTERISTICS | MIN | TYP | MAX | UNITS | CONDITIONS |
|------------------------|-----|---------------------|------|--------|-----------------------------------|
| Phase Noise | | | -102 | dBc/Hz | @ 10Hz Offset |
| | | | -132 | | @ 100Hz Offset |
| | | | -150 | | @ 1KHz Offset |
| | | | -152 | | @ 10KHz Offset |
| Short Term Stability | | 2x10 ⁻¹¹ | | Sec | Allen Variance @ 1 Sec |
| Spurious | | | -93 | dBc | Within 100Hz to 3MHz from Carrier |

| ABSOLUTE MAXIMUM RATING | MIN | TYP | MAX | UNITS | CONDITIONS |
|-------------------------|-----|-----|-----|-------|------------|
| Supply Voltage | | | 20 | VDC | |
| Storage Temperature | -45 | | +90 | °C | |
| Operable Temperature | -20 | | +80 | °C | |
| Load | | | 50 | pF | |

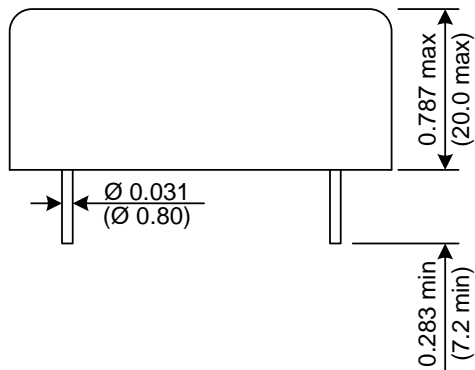
| ENVIRONMENTAL CONDITIONS | |
|--------------------------|---|
| SHOCK | IEC 68-2-27 (Test Ea) 30G, 10mSec, Half Sine |
| VIBRATION | IEC 68-2-6 (Test Fc) 0.35mm, 10G, 5-500Hz, 6 cycles/axis |
| THERMAL SHOCK | IEC 68-2-14 (Test Na) 30 min. in each extreme temperature |
| HUMIDITY | MIL-STD-202 method 106D |

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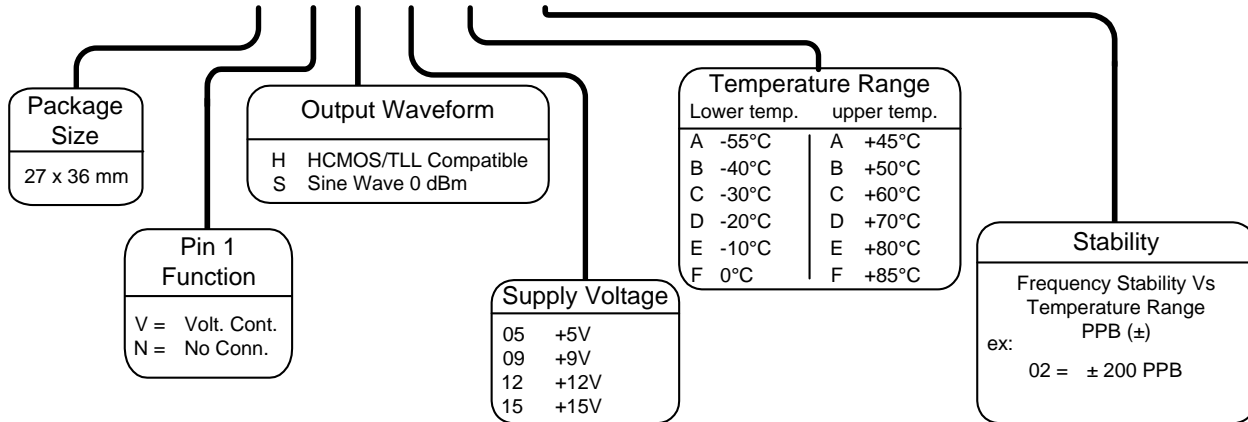


| Pin | Function |
|-----|-----------------|
| 1 | Control Voltage |
| 2 | No Connect |
| 3 | Supply Voltage |
| 4 | RF Output |
| 5 | Case Ground |



● Unless otherwise specified,
Dimensions are in: $\frac{IN}{(mm)}$

CO 27 V H 15 DE - 02 - 10.000



Example: CO27VH15DE-02-10.000

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