



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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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 | | | 500 | 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 | |
| Load | 45 | | 55 | % | @ (Voh-Vol)/2 |
| Load | | 15 | | pF | |

| 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 | |

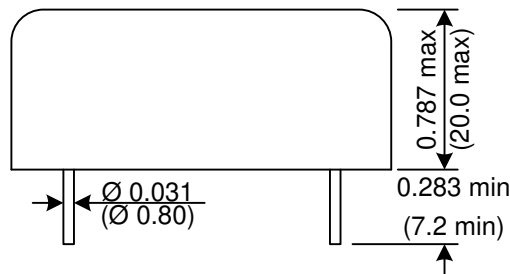
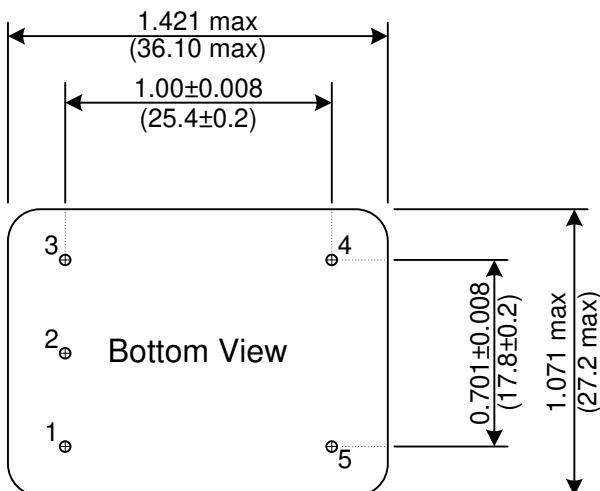
PN: CO27VH15DE-02-10.000 Rev. E

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HCMOS Output

| 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 | | 2×10^{-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 |



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

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

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