

| Frequency Stability Options | | | | |
|-----------------------------|----------------|---------------------------|-----------|-----------|
| Operating Temperature Range | | Frequency Stability (PPM) | | |
| | | ±25 | ±50 | ±100 |
| Standard | -0°C to +70°C | AS | BS | CS |
| Industrial | -40°C to +85°C | AI | BI | CI |

| Operating Conditions | |
|----------------------|-----------------|
| Storage Temp | -55°C to +125°C |
| Option Codes | |
| Supply Voltage | Option Code |
| +3.3V DC | 3 |

| Marking & Specification Code Format | | | | |
|-------------------------------------|--------------|---------------|-------------|------|
| Type | Voltage Code | OTR/Stability | Frequency | WWYY |
| VCP*431 | 3 | See Above | ie 175.0000 | 1611 |

| Electrical Characteristics Ta = +25°C, ^{Note} Inclusive of V _{DD} ±10%, Load Change ±10%, Ageing, Shock & Vibration | | | |
|---|----------------------------|---|-------------------------------|
| Parameter | Condition | Value | |
| Model | | AEL VCPF-431 | AEL VCPW-431 |
| Technology | | Ultra-Low Jitter | Low Cost |
| Frequency Range | | High-Q Fundamental Crystal with Multiplier Circuit | |
| Duty Cycle | @50% V _{DD} Level | 38.0 - 640.0MHz | 750kHz - 800.0MHz |
| Output Voltage | "1" Level | 50% ±5% | |
| | "0" Level | V _{DD} - 1.025V Min. Termination RL=50Ω to (V _{DD} -2.0V) | |
| VCXO Characteristics | Pulling Range | V _{DD} - 1.620V Min. Termination RL=50Ω to (V _{DD} -2.0V) | |
| | Linearity | ±80PPM Min. 1.65V ±1.3V (Please specify) | |
| Input Current | With 15pF Load | 6% Typ. - 10% Max. | |
| | | 38.0 - 100.0MHz : 65mA Max. | <24.0MHz : 25mA Max. |
| | | 100.01 - 320.0MHz : 80mA Max. | 24.01 - 96.0MHz : 65mA Max. |
| | | 320.01 - 640.0MHz : 90mA Max. | 96.01 - 800.0MHz : 100mA Max. |
| Rise/Fall Time | 20%-80% of PECL Wave | 0.4ns Typ. for 156.25MHz | 27ns Typ. for 155.52MHz |
| Start Up Time | 0V to V _{DD} | 10ms Max. | |
| Integrated Phase Jitter | 12kHz to 20MHz | 0.4ps Typ. for 156.250MHz | 2.6ps Typ. for 155.250MHz |
| Period Jitter RMS | Decoupling capacitor | 3ps Typ. for 156.250MHz | 4.3ps Typ. for 155.520MHz |
| Period Jitter p-p | V _{DD} to GND | 20ps Typ. for 156.250MHz | 27ps Typ. for 155.520MHz |
| Load | | RL=50Ω to (V _{DD} -2.0V) | |
| SSB Phase Noise (Typical) | Offset | Freq 156.250MHz | Freq 155.250MHz |
| | 10 Hz | -62dBc/Hz | -65dBc/Hz |
| | 100 Hz | -92dBc/Hz | -95dBc/Hz |
| | 1 kHz | -120dBc/Hz | -120dBc/Hz |
| | 10 kHz | -132dBc/Hz | -125dBc/Hz |
| | 100 kHz | -128dBc/Hz | -121dBc/Hz |
| | 1 MHz | -140dBc/Hz | -120dBc/Hz |
| 10 MHz | -150dBc/Hz | -140dBc/Hz | |

Dimensions (mm)

