

MGT(V) Series

TCXO with Voltage Control Option

5x7mm, CMOS or Clipped Sine



Features

- ▣ Frequency range of 5MHz to 26MHz
- ▣ Fundamental mode crystal
- ▣ High Reliability in accordance with MIL-STD-883. Class B
- ▣ Low power consumption



| Parameter | Symbol | Condition | Min | Typ | Max | Unit | Note |
|--------------------------------|------------------------------------|--|--------------------|----------------------|------------------------|------------------|-------------------------------|
| Frequency Range | F | | 5 | | 26 | MHz | |
| Frequency Stability | $\Delta F/F$ | Vs. Operating Temperature Initial Tolerance Vs. Supply Voltage Vs. Aging over 20 Years Vs. Load 15pF \pm 10% | | | \pm 0.2 \pm 4.6 | ppm | Total Inclusive Over 20 years |
| Operating Temperature Range | T | | 0 -40 | | +70 +85 | $^{\circ}$ C | Order Code B Order Code G |
| Supply Voltage | V _{cc} | | 4.75 3.13 | 5.00 3.30 | 5.25 3.47 | V | Order Code D Order Code E |
| CMOS Supply Current | I _c | | | | 6 | mA | |
| Clipped Sine Supply Current | I _c | | | | 3.5 | | |
| Voltage Control | V _c | For 3.3V model For 5.0V model | 0 0.5 | | 3.3 4.5 | V | |
| V _c Input Impedance | | | 100K | | | Ω | |
| APR | | APR inclusive of aging over 20 years. | 5 | | | ppm | See Ordering Information |
| Deviation slope | | Monotonic positive | | | | | |
| Linearity | | | -10 | | +10 | ppm/V | |
| Modulation BW | | | 10 | | | KHz | 3dB BW |
| SSB Phase Noise | | @ 100Hz @ 1 KHz @ 10 KHz | | -120 -140 -148 | | dBc/Hz | F _o =12.8MHz |
| Phase Jitter | | 1s over 12Khz ~ 20MHz | | | 3.5 | ps | F _o =12.8MHz |
| Start up | | | | | 2 | ms | |
| CMOS Output Level | V _{oh} V _{ol} | 15pF 50% \pm 5 symmetry | 90%V _{cc} | | 10%V _{cc} | V | |
| Clipped Sine Output Level | | @10KO // 10pF | 0.8 | | | V _{p-p} | |
| Rise/Fall Time | | | | | 8 | ms | |
| Storage Temp. | | | -55 | | +125 | $^{\circ}$ C | |

| | | |
|----------------------|-----------|---|
| Standard Frequencies | CMOS | 5, 6.4, 8, 10, 12.5, 12.8, 16, 19.44, 25MHz |
| | Clip Sine | 10, 12.5, 12.8, 16, 19.44, 25MHz |

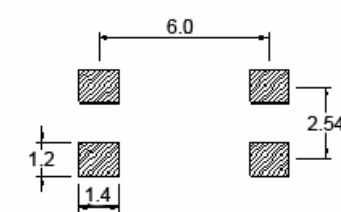
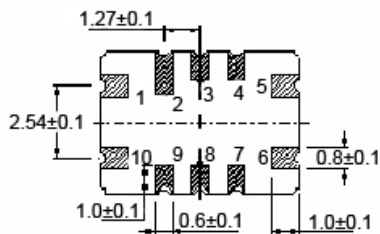
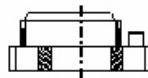
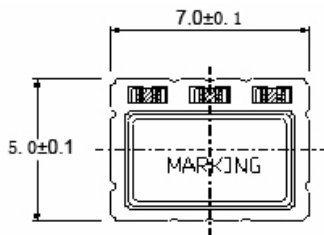
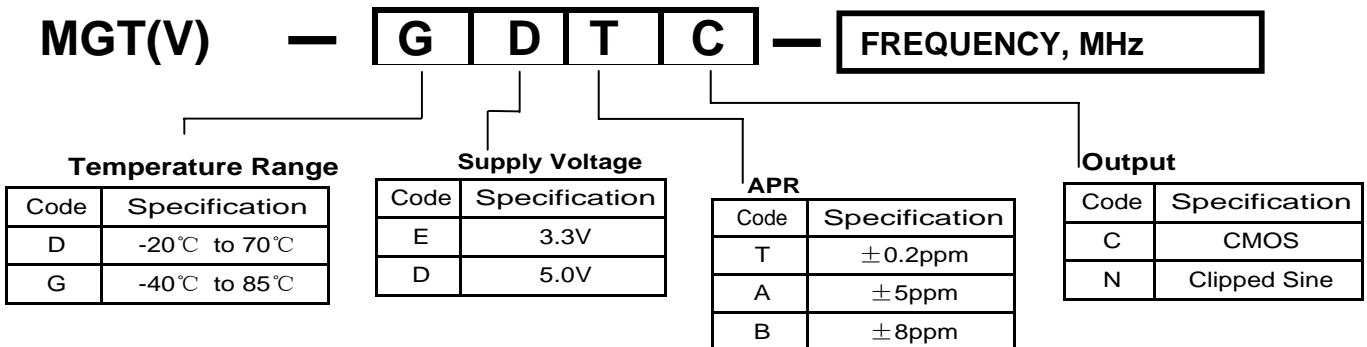
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How to Order



Recommended Soldering Pattern

| PIN | Specification |
|-----|----------------|
| 1 | Vcontrol or NC |
| 5 | GND |
| 6 | Output |
| 10 | Vcc |

Environmental and Mechanical

| Parameter | Specification |
|----------------------|--|
| Mechanical Shock | Per MIL-STD-202, Method 213, Condition E |
| Thermal Shock | Per MIL-STD-883, Method 1011, Condition A |
| Vibration | Per MIL-STD-883, Method 2007, Condition A |
| Soldering Conditions | 260°C for 10s max |
| Hermetic Seal | Leak rate less than 5×10^{-8} atm.cc/s of helium (crystal only) |

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