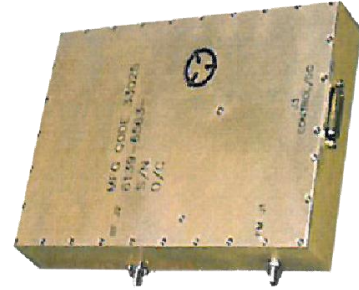


6139-6564-00 – DIGITALLY TUNED OSCILLATOR

TECHNICAL FEATURE

FEATURES

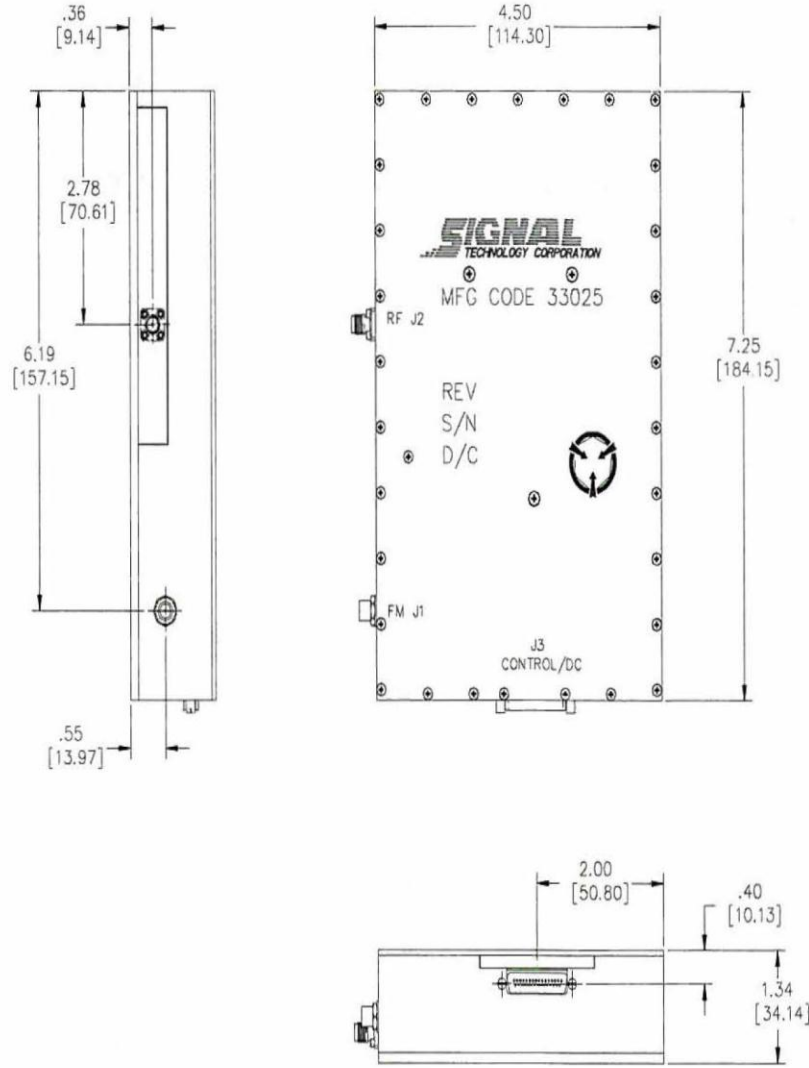
- Broadband, digital tuning
- Low post-tuning drift (PTD)
- Linear wideband FM modulation capability (optional)
- Internal heater for frequency stability



| | | | |
|---|---|----------------------|------------------------|
| Frequency | 6 to 18 GHz | | |
| Power Output | +10 dBm, minimum, +16 dBm, maximum | | |
| Sub-bands (at +25°C) | 5.985 to 9.015 GHz 8.985 to 11.315 GHz 11.285 to 14.365 GHz 14.335 to 18.015 GHz | | |
| Digital Tuning | 13 bits, 3 band select bits, 0.5 MHz/bit, nominal | | |
| Post Tuning Drift (1 μ S to 1 S) | $\leq 0.02\%$ of selected frequency | | |
| Harmonics, Integer | -25 dBc, maximum | | |
| Harmonics, Fractional | -60 dBc, maximum | | |
| Spurious | -60 dBc, maximum | | |
| Residual FM (-3 dB points) | 100 kHz p-p, maximum | | |
| Phase Noise | Offset | dBc/Hz, max | |
| | 100 kHz | -62 | |
| | 1 MHz | -80 | |
| | 10 MHz | -110 | |
| Bias Pushing | ± 0.2 MHz/V, maximum | | |
| Output VSWR | 2.0:1, maximum | | |
| Load Pulling (2.0:1 VSWR) | ± 1.0 MHz, maximum | | |
| Frequency Stability, -54°C to +85°C Includes set-on accuracy | ± 14 MHz, maximum | | |
| DC Power | +15 volts @ 1.5 A maximum, 25 mV p-p maximum ripple $\pm 3\%$ (10 kHz to 1 MHz) | | |
| | -15 volts @ 0.5 A maximum, 25 mV p-p maximum ripple $\pm 3\%$ (10 kHz to 1 MHz) | | |
| Heater Supply | +28 Volts A 2.0 A, maximum @ -54°C | | |
| Analog Tuning (FM Modulation) | DC to 10 MHz, ± 3 dB bandwidth Input Impedance: 1 kOhm, nominal | | |
| | Band | Modulation Deviation | Modulation Sensitivity |
| | 1 | 600 MHz p-p, min. | 120 MHz/V, min. |
| | 2 | 800 MHz p-p, min. | 160 MHz/V, min. |
| | 3 | 1200 MHz p-p, min. | 240 MHz/V, min. |
| | 4 | 1200 MHz p-p, min. | 240 MHz/V, min. |
| Modulation Sensitivity Ratio $\leq 5\%$ deviation, 1.2:1, maximum $\leq 20\%$ deviation, 2.0:1, maximum (Deviation cannot extend past sub-band limits) | | | |
| Temperature Range | -54°C to +85°C Operating, -54°C to +100°C Storage | | |
| RF & FM Tuning Connectors | SMA Female | | |
| DC, Heater Power & Digital Input Connector | 31 Pin D-Subminiature | | |
| Dimensions | 7.25 x 4.50 x 1.34 inches | | |

6139-6564-00 – DIGITALLY TUNED OSCILLATOR

OUTLINE DRAWING



MULTI-PIN CONNECTOR FUNCTION TABLE

| PIN | FUNCTION | PIN | FUNCTION | PIN | FUNCTION | PIN | FUNCTION |
|-----|--------------|-----|---------------------|-----|---------------|-----|---------------------|
| 1 | -15 VDC | 9 | DATA 10 | 17 | +15 VDC | 25 | DATA 11 |
| 2 | -15 VDC | 10 | DATA 9 | 18 | +15 VDC | 26 | DATA 12 (MSB) |
| 3 | RTN, -V | 11 | DATA 8 | 19 | RTN, +V | 27 | BAND SELECT 2 (MSB) |
| 4 | RTN, -V | 12 | BAND SELECT 0 (LSB) | 20 | RTN, +V | 28 | +28 VDC HTR RTN |
| 5 | RTN, DIGITAL | 13 | +28 VDC HTR | 21 | DATA 5 | 29 | +28 VDC HTR |
| 6 | RTN, DIGITAL | 14 | +28 VDC HTR RTN | 22 | DATA 1 | 30 | DATA 7 |
| 7 | DATA 4 | 15 | DATA 3 | 23 | DATA 0 (LSB) | 31 | DATA 6 |
| 8 | RTN, DIGITAL | 16 | DATA 2 | 24 | BAND SELECT 1 | | |

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