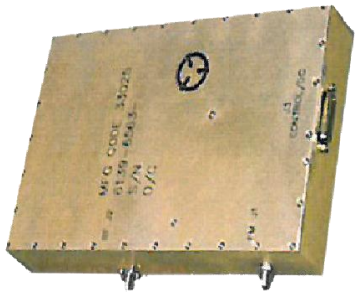
6139-6563-00 – DIGITALLY TUNED OSCILLATOR

TECHNICAL FEATURE

FEATURES

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



Frequency	2 to 18 GHz	
Power Output	+10 dBm, minimum, +16 dBm, maximum	
Sub-bands (at +25°C)	1.985 to 3.015 GHz 2.985 to 4.515 GHz 4.485 to 6.015 GHz 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 µS to 1 S)	≤ 0.02% of selected frequency (or 1 MHz, whichever is greater)	
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 ±3% (10 kHz to 1 MHz) -15 volts @ 0.5 A maximum, 25 mV p-p maximum ripple ±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	200 MHz p-p, min. / 40 MHz/V, min.
	2	300 MHz p-p, min. / 60 MHz/V, min.
	3	400 MHz p-p, min. / 80 MHz/V, min.
	4	600 MHz p-p, min. / 120 MHz/V, min.
	5	800 MHz p-p, min. / 160 MHz/V, min.
	6	1200 MHz p-p, min. / 240 MHz/V, min.
	7	1200 MHz p-p, min. / 240 MHz/V, min.
	Modulation Sensitivity Ratio ≤5% deviation, 1.2:1, maximum ≤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 DC, Heater Power & Digital Input Connector	SMA Female 31 Pin D-Subminiature	
Dimensions	7.25 x 4.50 x 1.34 inches	

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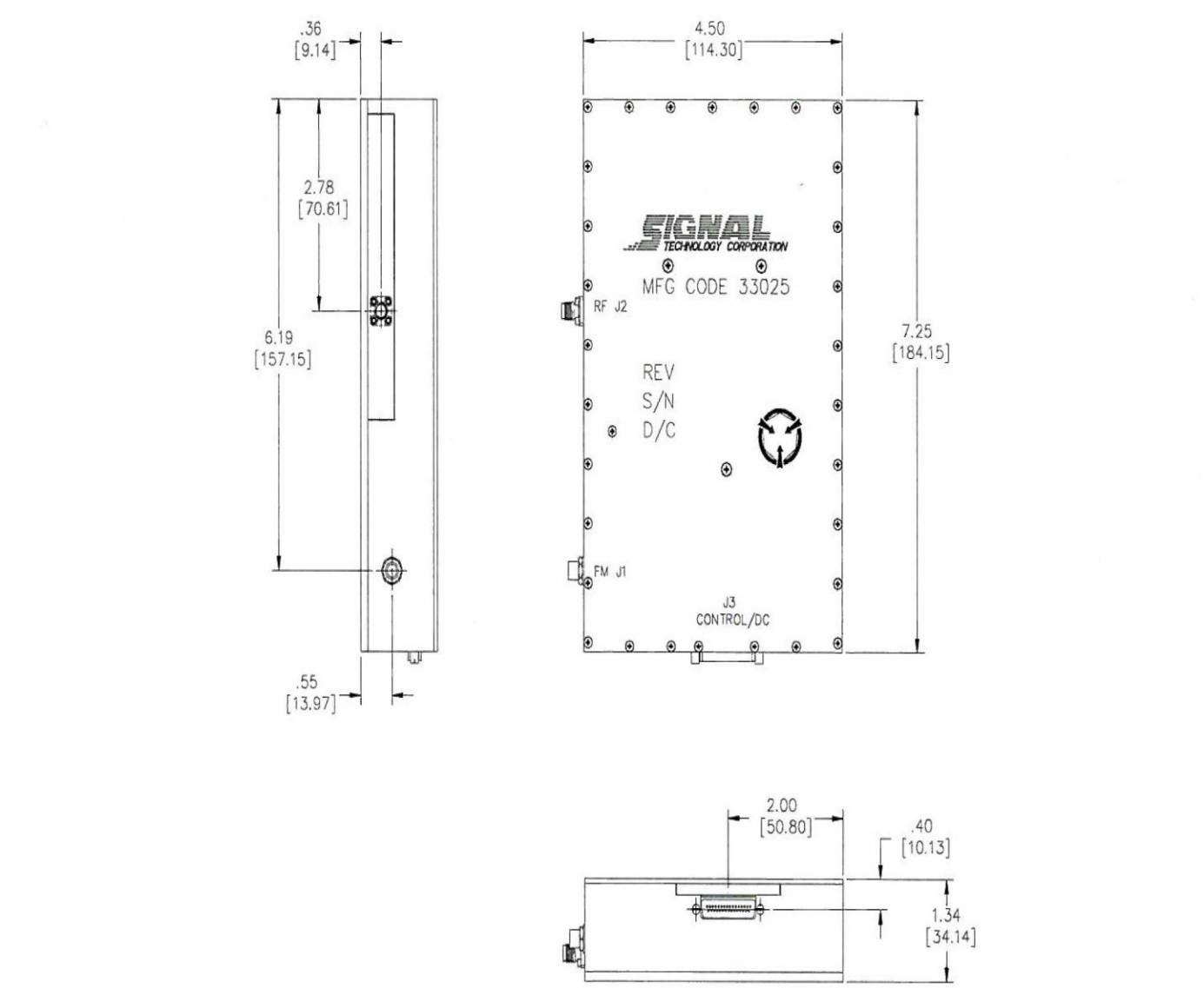
OUTLINE DRAWING



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		