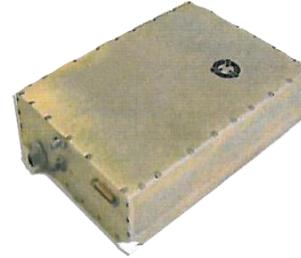


# 6139-6565-00 - FREQUENCY LOCKED OSCILLATOR

## TECHNICAL FEATURE

### FEATURES

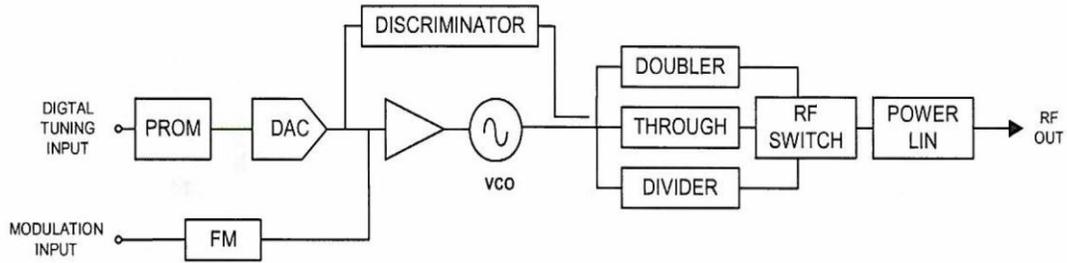
- Broadband, digital tuning
- Low post-tuning drift (PTD)
- Excellent frequency stability
- Excellent absolute accuracy
- Linear wideband FM modulation



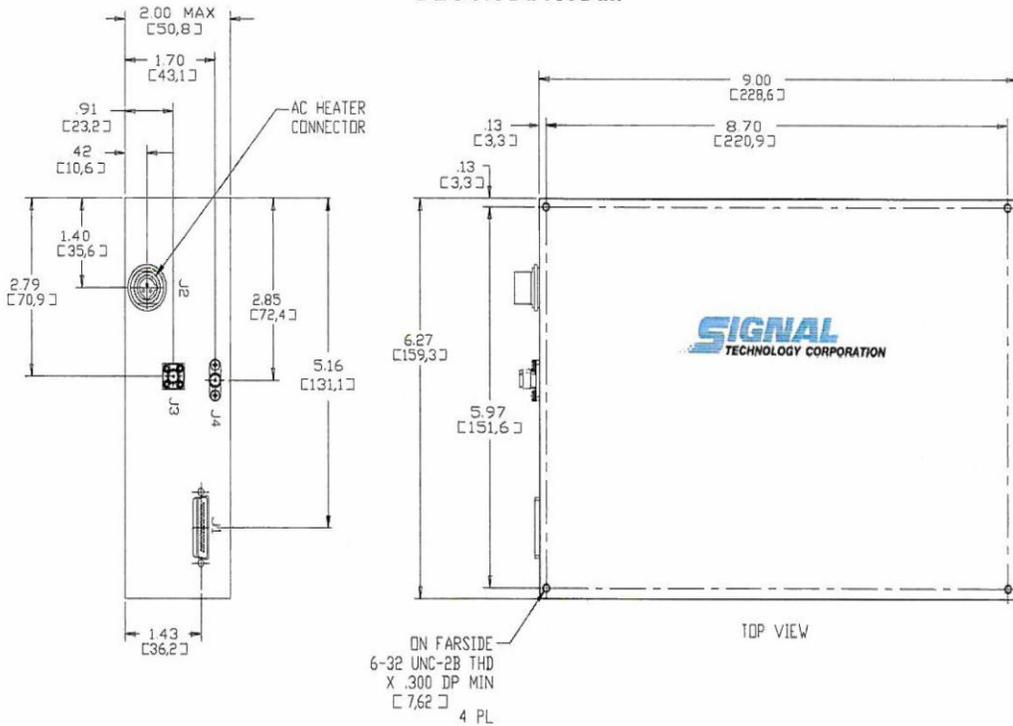
Frequency	2 to 18 GHz			
Output Power	+10 dBm, minimum, +16 dBm, maximum			
Sub-bands (at 30°C)	1.995 to 3.005 GHz 2.995 to 4.505 GHz 4.495 to 6.005 GHz 5.995 to 9.005 GHz 8.995 to 11.305 GHz 11.295 to 14.335 GHz 14.345 to 18.005 GHz			
Frequency Accuracy @ +30°C	±250 kHz, maximum			
Digital Tuning	14 bits, 3 band select bits, 0.25 MHz/bit, nominal 1 bit Open Loop/Closed Loop			
Post Tuning Drift (1 μS to 1 S)	2 MHz, maximum			
Harmonics, Integer	-25 dBc, maximum			
Harmonics, Fractional	-60 dBc, maximum			
Spurious	-65 dBc, maximum			
Residual FM (-3 dB points)	Closed Loop 10 kHz p-p, maximum Open Loop 75 kHz p-p, maximum			
Phase Noise	Closed Loop		Open Loop	
	Offset	dBc/Hz, max	Offset	dBc/Hz, max.
	100 kHz	-85	100 kHz	-65
	1 MHz	-95	1 MHz	-85
	10 MHz	-110	10 MHz	-112
Bias Pushing	±0.1 MHz/V, maximum			
Output VSWR	2.0:1, maximum			
Load Pulling (2.0:1 VSWR)	±0.2 MHz, maximum			
Frequency Stability, 0°C to +60°C	±2 MHz, maximum			
DC Power	+15 volts @ 3.1 A maximum, 25 mV p-p maximum ripple ±3% (10 kHz to 1 MHz) -15 volts @ 1.5 A maximum, 25 mV p-p maximum ripple ±3% (10 kHz to 1 MHz)			
Heater Supply	100 – 225 VAC @ 0.70 A max., 47 – 420 HZ (+28 VDC Optional)			
Analog Tuning (FM Modulation, Open Loop Only)	Bands 1 and 2 500 MHz p-p deviation, minimum, DC -10 MHz 125 MHz/V, nominal Bands 3 through 7 1000 MHz p-p deviation, minimum, DC – 10 MHz 250 MHz/V, nominal (Deviation cannot extend past sub-band limits)			
Temperature Range	0°C to +60°C Operating, -54°C to +100°C Storage			
RF & FM Tuning Connectors	SMA Female			
DC Power & Digital Input Connector	31 Pin Microminiature D			
Heater Power	¼" NPT 3 Pin Male Plug			
Dimensions	9.00 x 6.27 x 2.00 inches			

# 6139-6565-00 - FREQUENCY LOCKED OSCILLATOR

## TYPICAL FLO BLOCK DIAGRAM



## BLOCK DIAGRAM



## 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		

### CONNECTOR DESCRIPTION

CONNECTOR	DESCRIPTION	TYPE
J1	DIG/PWR CONN	31 PIN MICROMINIATURE
J2	HTR PWR CONN	1/4" NPT 3 PIN MALE PLUG
J3	RF OUTPUT	SMA JACK (FEMALE)
J4	FM INPUT	SMA JACK (FEMALE)

### J2 - CONNECTOR

PIN	FUNCTION
1	GRD
2	AC HOT
3	AC RTN