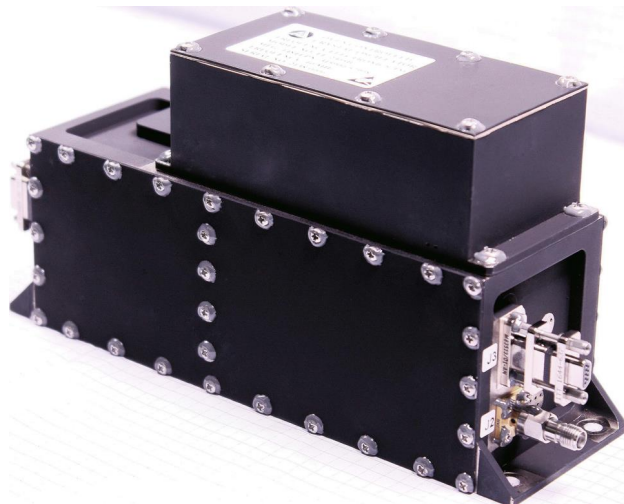




Model FE-5148 OCXO

- Standalone Master Reference Oscillator
- Available in 10 MHz, 10.24 MHz as well as other output frequencies
- RF Output Power available from +13 to +25dBm
- Modular unit design allows for wide range of Input Voltages ranging from +28 to +100V DC
- Highly Stable with Low Phase Noise and Excellent Allan Deviation
- Space Qualified design with history on multiple programs
- Radiation Hardened for GEO & LEO Applications

Parameter	Condition	Typical	Max	Unit
Output Frequency		10		MHz
RF Output Power	Into 50 Ω	+13 +2 dBm		dBm
Aging		$\pm 5E-11$		/Day
Allan Deviation	1 second	<1.0E-12		
	10 seconds	<5.0E-12		
Stability	Long Term Stability (all conditions)		$\pm 5E-7$	15 years
	Diurnal Stability		$\pm 5E-9$	15°C
Phase Noise	1 Hz	-108		dBc/Hz
	10Hz	-133		dBc/Hz
	100Hz	-147		dBc/Hz
	1kHz	-153		dBc/Hz
	10kHz	-156		dBc/Hz
	100kHz	-156		dBc/Hz
	1MHz	-159		dBc/Hz
Spurs	$f-f_0 < 100$ kHz		<-100	dBc
	$100 \text{ kHz} \leq f-f_0 < 9.9$ MHz		<-90	dBc
	$9.9 \text{ MHz} \leq f-f_0 < 10.1$ MHz		<-100	dBc
	$10.1 \text{ MHz} \leq f-f_0 < 30$ MHz		<-80	dBc
Harmonics			<-50	dBc
Warm-Up		15	≤ 30	Minutes
VSWR Enable State			2.0:1	
VSWR Disable State			6.5:1	
Input Voltage		+70		volts
Power Consumption	Warm-up, -15°C in Vac	11.5		watts
	Warm-up, 25°C in Air	12		watts
	Continuous, +25°C in Vac	8		watts
	Continuous, +25°C in Air	8		watts
	Standby, +25°C in Vac	6.5		watts
	Standby, +25°C in Air	6.5		watts



Environment	Comments	Level
Thermal Vac Environment	Qualification	-34° to +71°C
	Protoflight	-29 to +71°C
	Acceptance	-24 to +66°C
	Non-Op Qual Range	-34 to +71°C
	Non-Op Protoflight Range	-29 to +71°C
Pyro Shock	100Hz	20g SRS
	2000Hz	2000g SRS
	10000Hz	2000g SRS
Vibration - Random	Any Axis	18 grms
EMI/EMC Compliance	Qualified per standard MIL-STD-461/462 tests	
Radiation	RAD Hardened for typical LEO & GEO total dose and displacement damage environments; Not SEE susceptible	

Item	Comments
Commands	ON/OFF Command +26 Relay Pulse RF Enable/Disable Command +26 Relay Pulse
Telemetries	Oven Temp - Active Analog - 0 to +5v Chassis Temp - Thermistor floating leads - 10k
Connectors	RF Connector SMA Female - M83517/04-32005 J1: 15 pin MicroD-Subminiature Plug In - J1: 9 pin MicroD-Subminiature Plug In -
Unit Envelope Dimensions:	L x W x H (in) - 7.5" x 2.5" x 4.1"
Mass	1350 Grams (Max)

Rev 1 June 8, 2023