RF Components

10 MHz Oscillator

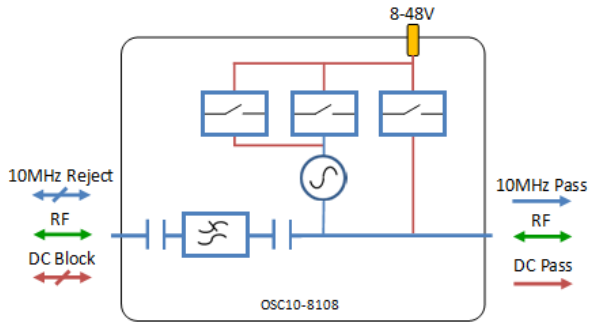
850 - 2150 MHz

Model Number: OSC-10-8108

- 10 MHz Ovenised Oscillator
- Selectable output power
- 10 MHz & DC multiplexed output
- Input RF port to take L-band signal and multiplex the 10MHz internal source
- Option to insert DC onto the output port
- 10MHz and DC independently controlled by ON/OFF switch.
- Requires 8-48V. External DC

Available with RF connector options:

- 50 Ω SMA
- 50 Ω N-type
- 50 Ω BNC
- 75 Ω BNC
- 75 Ω F-type



8-48V
External DC powering

Compact
Housed in rugged compact enclosure

850-2150 MHz
Operating frequency range.

RF Parameters						
OSC-10-8108		S5S5	N5N5	B5B5	B7B7	F7F7
Frequency Range		850 - 2150 MHz				
RF Connectors		50Ω SMA	50Ω N-Type	50Ω BNC	75Ω BNC	75Ω F-Type
Insertion Loss (dB)	Typ.	0.5	0.5	0.5	0.7	0.7
	Max.	1.0	1.0	1.0	1.0	1.0
Flatness ± (dB)		0.25	0.25	0.3	0.4	0.5
Return Loss L-band port (dB)	Typ.	16	16	14	10	10
	Min	10	10	10	8	8
Return Loss Multiplexed port (dB)	Typ.	15	15	12	10	10
	Min.	10	10	10	8	8
10MHz Rejection is –55dB* *to ports which are applicable						

Broadcast

Marine Oil & Gas

SNG & VSAT

Satellite Teleport

RF Components

Model Number: OSC-10-8108

10 MHz Oscillator

Technical specifications and operating parameters

Environmental		
Operating Temperature		0˚C to +55˚C
Storage Temperature		-20˚C to +75˚C
Location		Indoor use Only
Humidity	Max	85% non-condensing
Altitude	Max	10,000 feet

Max Operating Parameters		
Input RF Power		+36 dBm
DC Voltage		55V
DC Current	Max	3A

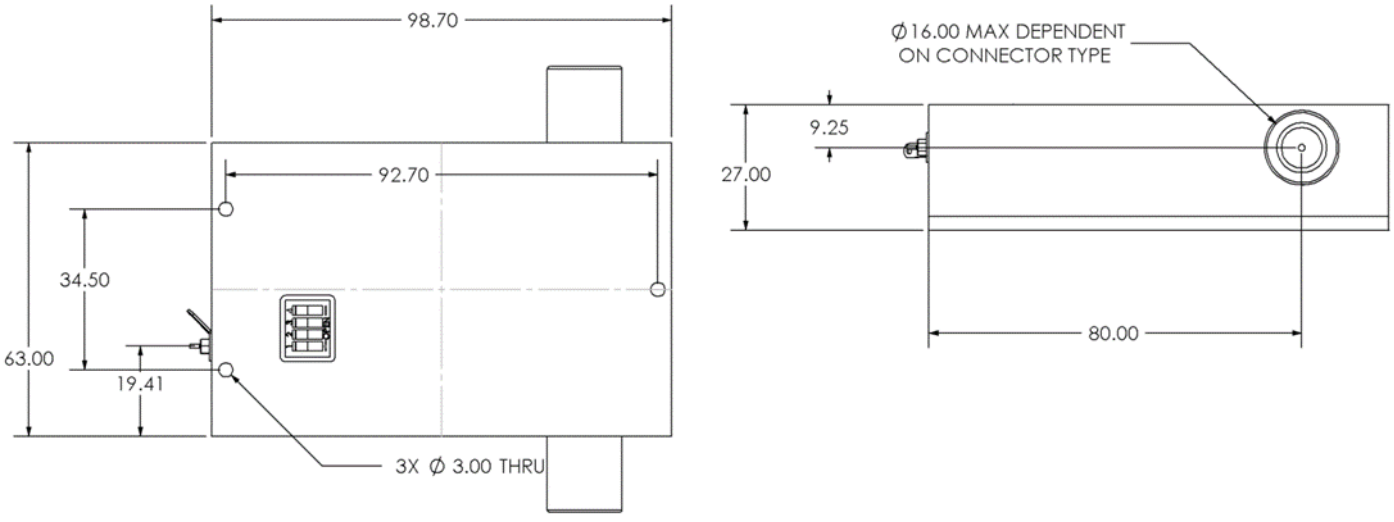
❗ Operation beyond these limits may cause instantaneous and permanent damage.

Phase Noise Characteristics (dBc/Hz)	
1Hz	<-85
10Hz	<-115
100Hz	<-140
1000Hz	<-150
10000Hz	<-155

10MHz Source Characteristics		
Frequency Setting		10,0000,000 ±10 MHz
Level (dBm)		0, 5 , 10 or 15 ±1.5
Output Type		Sinewave
Harmonic Rejection	2nd	>50 dB
	3rd	>40 dB
	4th	>45 dB
	5th	>60 dB

Oscillator Characteristics	
Frequency Stability	
Over temperature	< ± $3x10^{-8}$ (Warm up time at 25°C < ± $1x10^{-7}$ is less than 2 minutes)
Short Term Stability (per second)	< ± $1x10^{-11}$
Load change	< ± $5x10^{-9}$
Over Time (per year)	< ± $5x10^{-8}$
Stability with Aging	
Per Day	<± $2x10^{-9}$
Per Year	<± $5x10^{-7}$

Physical Dimensions (mm)



Note: The specification is subject to regular reviews and will be updated from time to time as part of our continuing product development and improved specification accuracy.

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RoHS COMPLIANT

Pb Pb-Free

Table of Operations

Switch	Function	
	Closed	Open
Sw1	+5dB Gain	No Gain
Sw2	+10dB Gain	No Gain
Sw3	10MHz Inject	10 MHz inject off
Sw4	DC Inject	DC inject off

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