

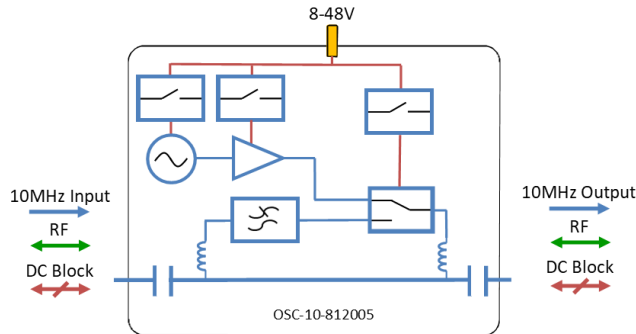


RF Components

10 MHz Redundant Oscillator

850 - 2150 MHz

Model Number:
OSC-10-812005



- Internal 10 MHz Ovenised Oscillator
- Automatically switches to internal 10MHz when external reference is not present (threshold is 0dBm)
- Selectable output power for internal oscillator
- Option to force internal 10MHz
- 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



850-2150 MHz
Operating frequency
range.

Compact
Housed in
rugged compact
enclosure

RF Parameters						
OSC-10-812005	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

Broadcast



Marine Oil & Gas



SNG & VSAT



Satellite Teleport





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	Max	+36 dBm
Input 10MHz Power	Max	+10 dBm
DC Voltage	Max	55V
DC Inject Current	Max	3A
DC Consumption	Typ	1A on startup, 400mA Steady State

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

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

Internal 10MHz Oscillator Characteristics	
Frequency Stability	
Over temperature	$< \pm 3 \times 10^{-8}$ (Warm up time at 25°C $< \pm 1 \times 10^{-7}$ is less than 2 minutes)
Short Term Stability (per second)	$< \pm 1 \times 10^{-11}$
Load change	$< \pm 5 \times 10^{-9}$
Over Time (per year)	$< \pm 5 \times 10^{-8}$
Stability with Aging	
Per Day	$< \pm 2 \times 10^{-9}$
Per Year	$< \pm 5 \times 10^{-7}$

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

Table of Operations

Switch Functions		
Switch	Function	
	Closed	Open
SW1	+5 dB Gain	No Gain
SW2	+10 dB Gain	No Gain
SW3	10MHz Redundancy ON	10MHz Redundancy OFF (Internal Reference ON)
SW4	DC Inject ON	DC Inject OFF

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.

