AT-PDRO-13.5GHz-IR

Phased Locked Dielectric Resonator Oscillator

PRDO, 13.5GHz, Super Low Phase Noise 100MHz OCXO, Internal Referenced

Product Overview

AT Microwave provides Phased Locked Dielectric Resonator Oscillator (PLDRO) with state of art performance with high stable, reliable and efficient from 1GHz to 32GHz.

The PLDRO is with external or internal referenced option. The standard internal OCXO is with 100MHz, -157dBc/Hz 1kHz and +/-0.1ppm. The internal reference can also be locked to a 10MHz external reference according to the application.

More information, please visit www.atmicrowave.com

Advantages

- ✓ Low Phase Noise
- ✓ Low Harmonics
- ✓ Low Spurs
- ✓ Internal or external Referenced

Application

- ✓ 5G Communication
- ✓ Test Equipment
- ✓ ROF (RF Over Fiber)
- ✓ Radar System

Mechanical Information

Item	Description
RF Output Port	SMA Female
Reference Input	SMA Female
Vdd Power Supply	PIN
Phase Locked Indicator	PIN
Case Material	Aluminum
Finish	Nickel Plated
Weight	50g
Size:	57.2x57.2x35.7mm

Shanghai AT Microwave Limited

Tel:021-6229 1233 Email:sales@atmicrowave.com www.atmicrowave.com

AT-PDRO-13.5GHz-IR

Phased Locked Dielectric Resonator Oscillator

Key Features

Parameter	Min	Typical	Max
RF OUT Frequency Range		13.5GHz	
Output Power	+10	+13dBm	
100MHz OXCO (+/-0.1ppm) Phase Noise		-130dBc/Hz @100Hz; -155dBc/Hz @1kHz -165dBc/Hz @10kHz; -165dBc/Hz @100kHz -165dBc/Hz @1MHz	
Phase Noise if External Referenced	Reference Phase Noise + 20lgN +3dB		
Output Frequency Phase Noise with internal referenced	-87dBc/Hz @100Hz; -109dBc/Hz @1kHz -118dBc/Hz @10kHz; -118dBc/Hz @100kHz -140dBc/Hz @1MHz		
Harmonics		-20dBc	
Spurs		-70dBc	
Power Supply		+12V/0.6A	
Phase Lock Indicator		Lock, TTL High	
Spec Temp		25C	

Absolute Maximum Ratings Table

Parameter	Value
Drain Supply	+15V
Reference Input Power	+10dBm
Operating Temperature	-40 to + 70C
Storage Temperature	-50 to +150C

Notes:

1. Datasheet may be changed according to update of MMIC, Raw materials , process, and so on.
2. This data is only for reference, not for guaranteed specifications.
3. Please contact AT Microwave team to make sure you have the most current data.

Shanghai AT Microwave Limited

Tel:021-6229 1233 Email:sales@atmicrowave.com www.atmicrowave.com

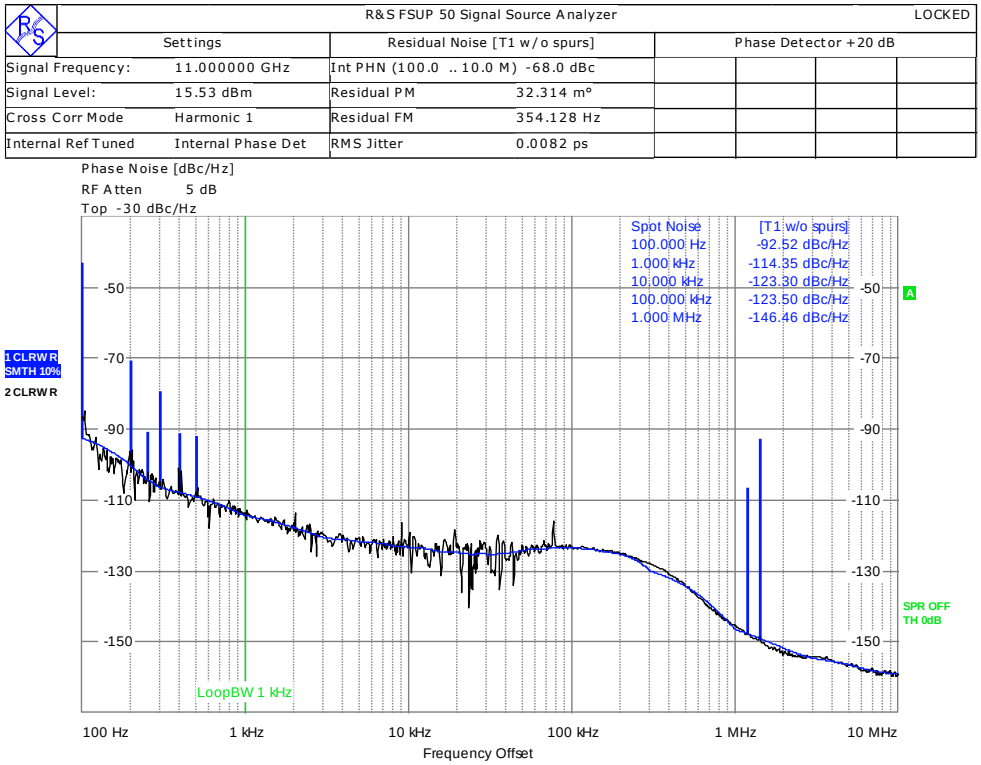
AT-PDRO-13.5GHz-IR

Phased Locked Dielectric Resonator Oscillator

Typical Phase Noise vs Frequency

Frequency	1	2	4	6	8	10	12	14	16
dBc/Hz@100Hz	-108	-102	-96	-92	-92	-88	-88	-86	-83
dBc/Hz@1kHz	-133	-126	-120	-116	-115	-113	-110	-108	-102
dBc/Hz@10kHz	-135	-131	-126	-120	-120	-120	-118	-118	-105
dBc/Hz@100kHz	-135	-131	-126	-120	-120	-120	-120	-118	-110
dBc/Hz@1MHz	-140	-140	-140	-140	-140	-140	-140	-140	-138

Frequency	17	18	20	22	24	26	28	30	32
dBc/Hz@100Hz	-83	-83	-80	-80	-80	-80	-78	-78	-78
dBc/Hz@1kHz	-108	-108	-104	-104	-104	-102	-102	-96	-96
dBc/Hz@10kHz	-114	-114	-113	-112	-112	-110	-110	-99	-99
dBc/Hz@100kHz	-114	-114	-113	-112	-112	-110	-110	-104	-104
dBc/Hz@1MHz	-136	-136	-134	-134	-133	-132	-131	-130	-130



Measurement Aborted

Date: 19.JUN.2021 02:39:46

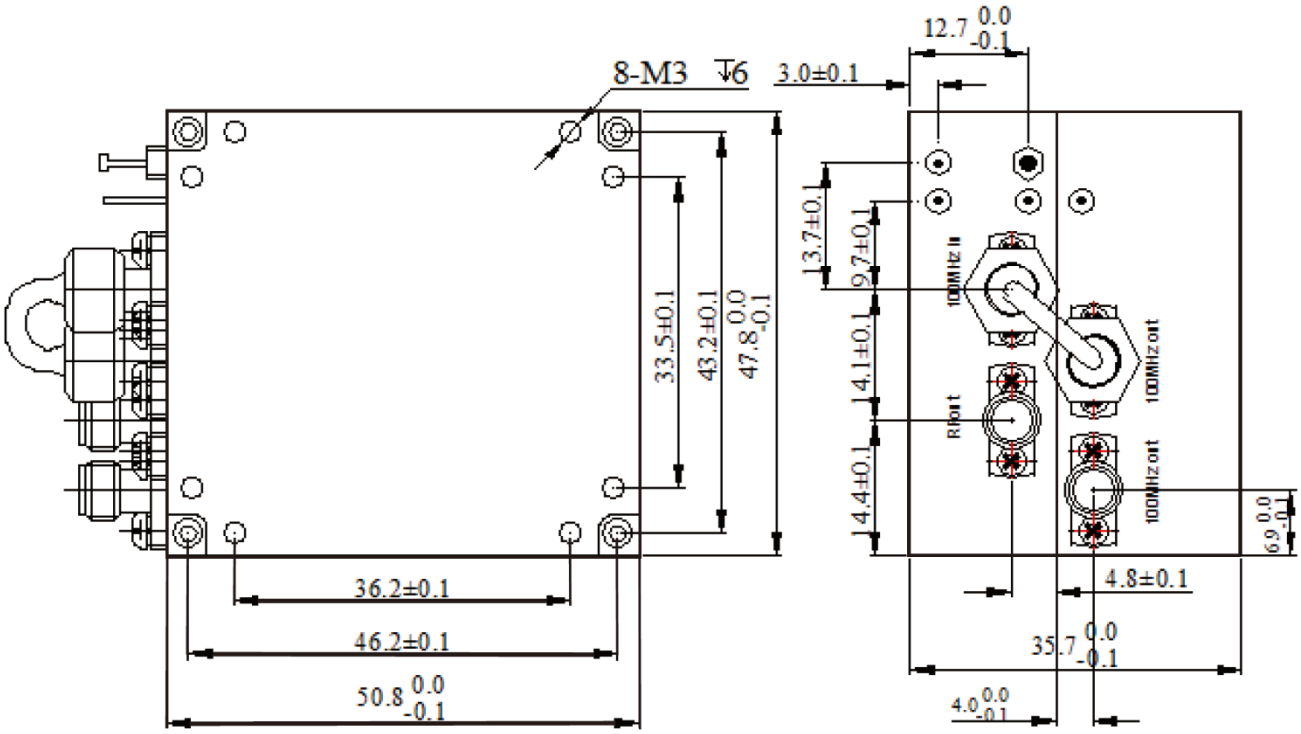
Shanghai AT Microwave Limited

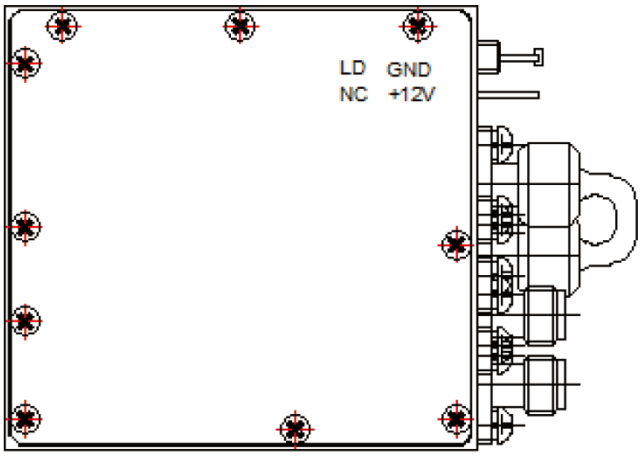
Tel:021-6229 1233 Email:sales@atmicrowave.com www.atmicrowave.com

AT-PDRO-13.5GHz-IR

Phased Locked Dielectric Resonator Oscillator

Dimension: (unit in mm)





Shanghai AT Microwave Limited

Tel:021-6229 1233 Email:sales@atmicrowave.com www.atmicrowave.com