

Descriptions

The PFRM-1-10 series is a single channel frequency reference module that provides a highly stable 10 MHz sine wave output. The OCXO with excellent performance, housed inside this series provides a temperature stability from ± 10 ppb to ± 100 ppb over operating temperature range.



Features

- ❖ Single channel output
- ❖ 10 MHz output
- ❖ Sine wave
- ❖ Internal OCXO with excellent performance
- ❖ Electronic frequency adjustment
- ❖ Various options available

Applications

- Frequency reference for oscillators
- Military electronic systems
- SATCOM
- External frequency synchronization of instruments
- Telecommunication standards

Ordering Information

- ❖ PFRM-1-10-**TS-OP-PN-SV**

- **TS**: Frequency Stability vs. Temperature (ppb)
- **OP**: Output Power (dBm)
- **PN**: Phase Noise (dBc/Hz)
- **SV**: Supply Voltage (Vdc)

- ❖ Example

- PFRM-1-10-**TS1-05-ULN-12**
 - . Frequency Stability vs. Temperature: ± 100 ppb over -20 °C to 70 °C
 - . Output Power: 5 dBm
 - . Phase Noise: Ultra-Low Noise (See "Note 3")
 - . Supply Voltage: 12 Vdc

Specifications

Parameter		Unit	Min.	Typ.	Max.	Remarks
Frequency Calibration		ppm	-0.1		+0.1	
Frequency Stability vs. Temperature		ppb	Note 1			
Output	Frequency	MHz	10			
	Power	dBm	Note 2			
	Harmonics	dBc			-60	
	Spurious	dBc		-80	-70	
	Load Impedance	Ohm	50			
Phase Noise		dBc/Hz	Note 3			
Supply Voltage		Vdc	6 or 12			
Current Consumption	Steady State	mA	Consult Factory			
	Warm-up		Consult Factory			
Warm Up Time		min		3	5	
Operating Temperature		°C	Note 1			
Storage Temperature		°C	-40 to 85			
Housing (L x W x H)		mm	65.0 x 40.0 x 23.5			

Note 1

Temp. (°C)	Frequency Stability	Phase Noise	Remarks
-20 to 70	TS1	±100	ULN
	TS2	±50	ULN
	TS3	±30	LN
	TS4	±10	LN
-40 to 75	TS5	±100	ULN
	TS6	±50	LN
	TS7	±30	LN

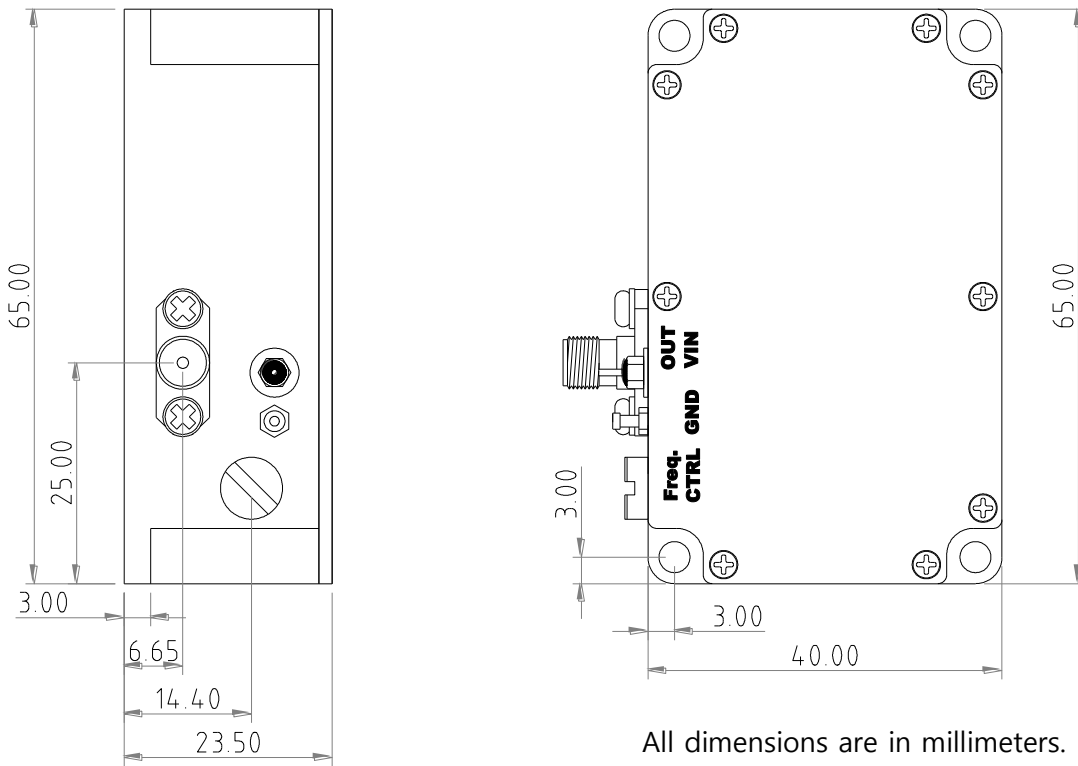
Consult factory to order other frequency stability

Note 2 Available order from 0 to 7 dBm in 1dB steps.

Note 3

Option	Frequency Offset	Unit	Min.	Typ.	Max.	Remarks
LN (Low Noise)	100Hz offset	dBc/Hz		-140	-135	
	1KHz offset	dBc/Hz		-150	-145	
	10KHz offset	dBc/Hz		-155	-150	
	100KHz offset	dBc/Hz		-155	-150	
	1MHz offset	dBc/Hz		-155	-150	
ULN (Ultra-Low Noise)	100Hz offset	dBc/Hz		-155	-150	
	1KHz offset	dBc/Hz		-165	-160	
	10KHz offset	dBc/Hz		-170	-165	
	100KHz offset	dBc/Hz		-170	-165	
	1MHz offset	dBc/Hz		-170	-165	

Housing Drawings



Marking	Connector	Description
OUT	SMA-Jack, 50 ohm	Output
VIN	EMI Feed-thru	Supply Voltage
Freq. CTRL	Flat Head Wrench Bolt	Electronic Frequency Control
GND	Turret Thread Terminal	GND

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