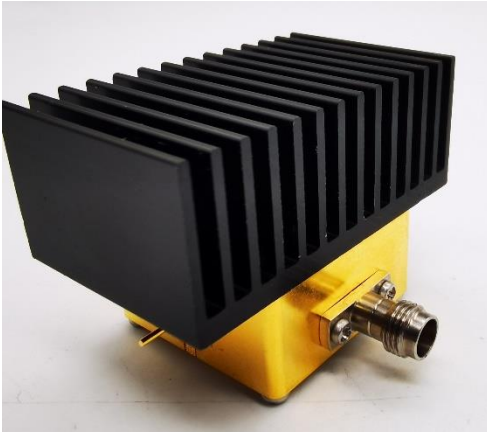


5-10GHz Voltage Control Oscillator, High Power



Product Overview

AT-VCO-0510A-20 is a high performance voltage controlled oscillator module from 5-10GHz. The VCO provides very low phase noise and low power consumption.

Both input and output ports are SMA connector. The Vtune port accepts an analog tuning voltage from 0 to +18V

More information, please visit www.atmicrowave.com

Advantages

- ✓ Wideband Tuning
- ✓ Low SSB phase noise
- ✓ Low power consumption
- ✓ Single Power Supply

Application

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

Key Features

Parameter	Min	Typical	Max
RF OUT Frequency Range		5-10GHz	
Output Power(note)	+18	+20dBm	
Phase Noise @10kHz		-65dBc/Hz	
Phase Noise @100kHz		-95dBc/Hz	
Phase Noise @1MHz		-110dBc/Hz	
Vtune Range	0		+18V
Vtune Current		1 uA	10uA
3dB FM BW (No Test)		1MHz	
2 nd Harmonics		-14dBc	
Vdd		+5V	+8V
Current		200mA	
Sensitivity		250 to 400MHz/V	
Temp		25C	





AT-VCO-0510A-20

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Note: Customized Output power from 0 to +30dBm is available according to request.

Mechanical Information

Item	Description
Vtune Port	SMA Female
RF Output Port	SMA Female
Vdd Power Supply	PIN
Case Material	Copper
Finish	Gold Plated
Weight (Without Heatsink)	50g
Size:	30x30x9.5 mm

Absolute Maximum Ratings Table

Parameter	Value
Drain Supply	+15V
Vtune	+22V
Operating Temperature	-20 to + 70C
Storage Temperature	-65 to +150C

Caution:

Please pay attention to the case temperature. If case temperature exceed higher than +50C, heat sink and fan are required, or the amplifier may be damaged.

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.

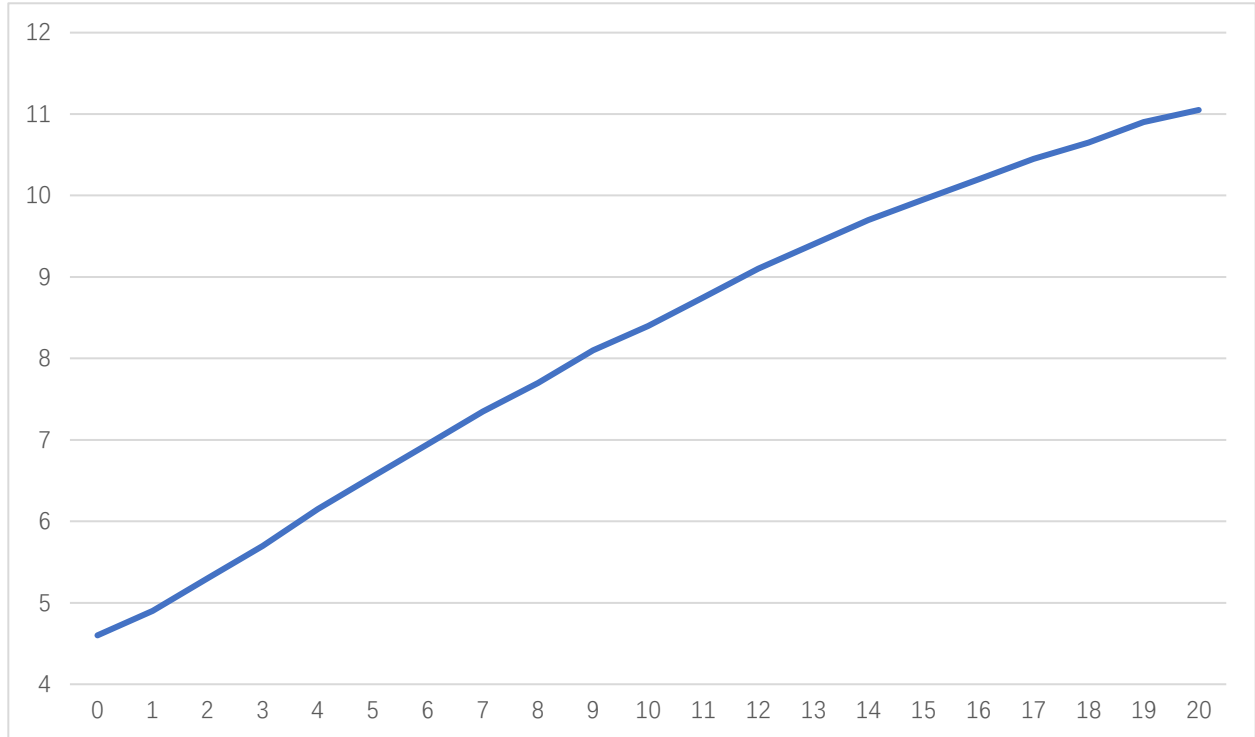




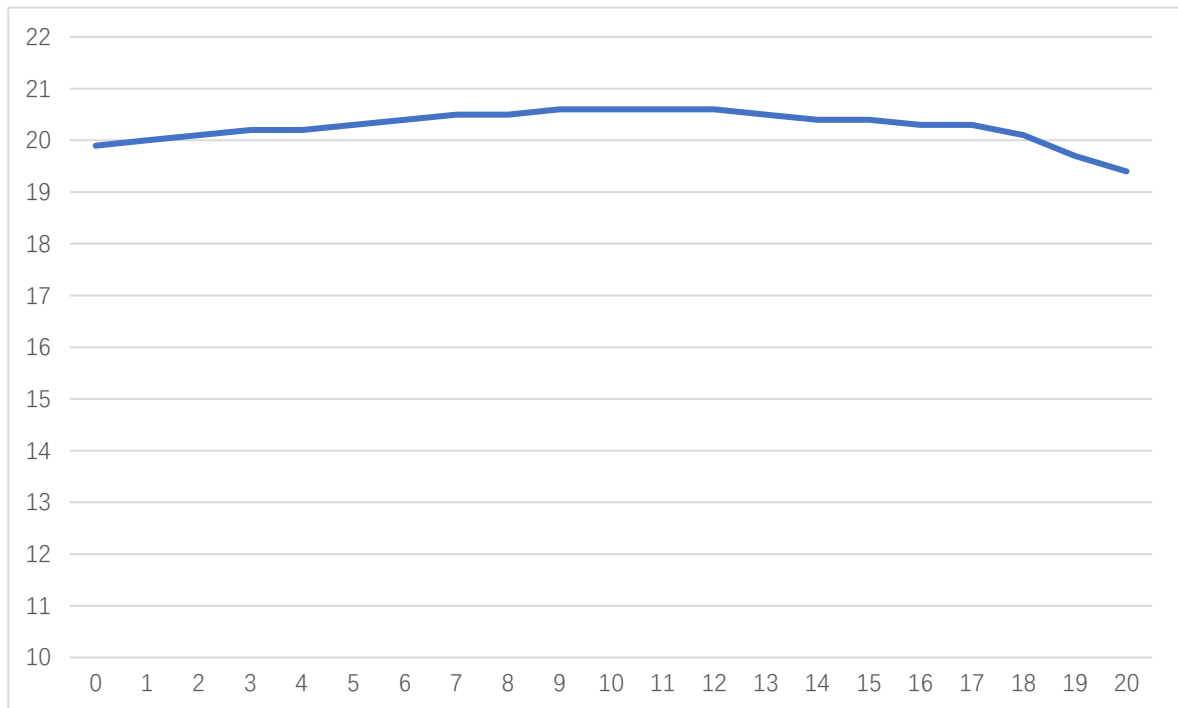
AT-VCO-0510A-20

5-10GHz Voltage Control Oscillator

Test Data:

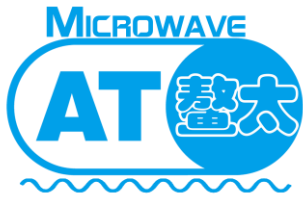


Output Frequency vs Tuning Voltage



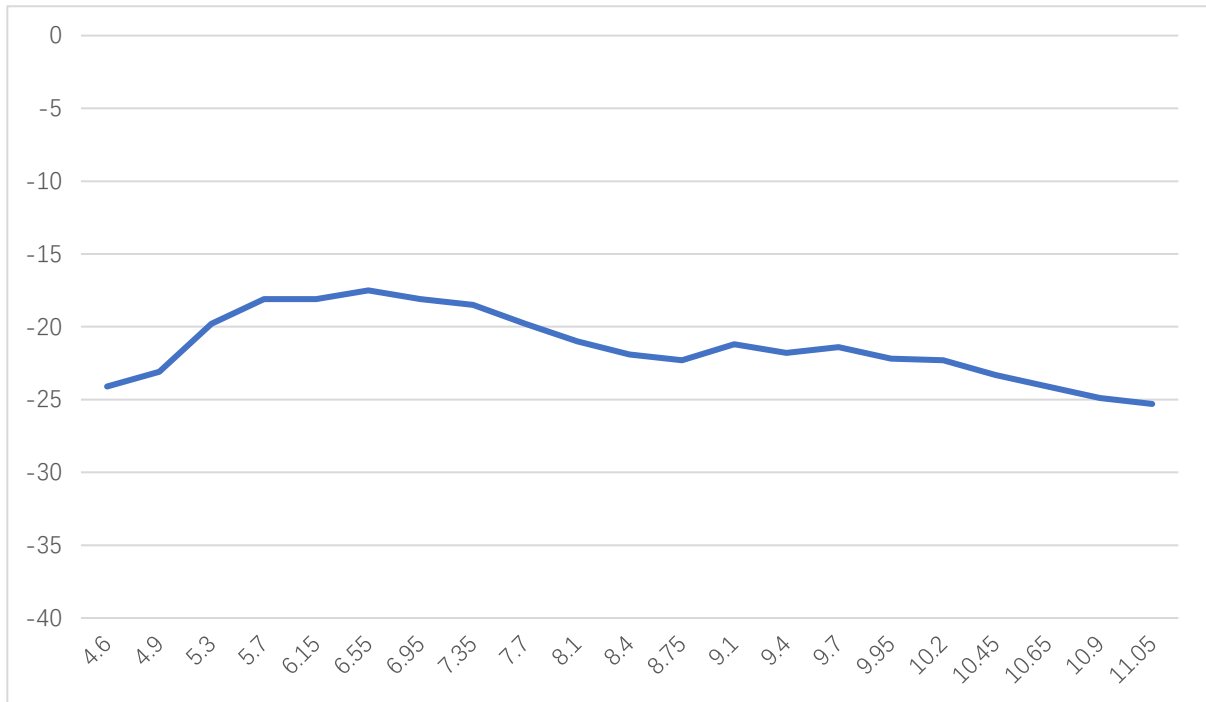
Output Frequency vs Tuning Voltage



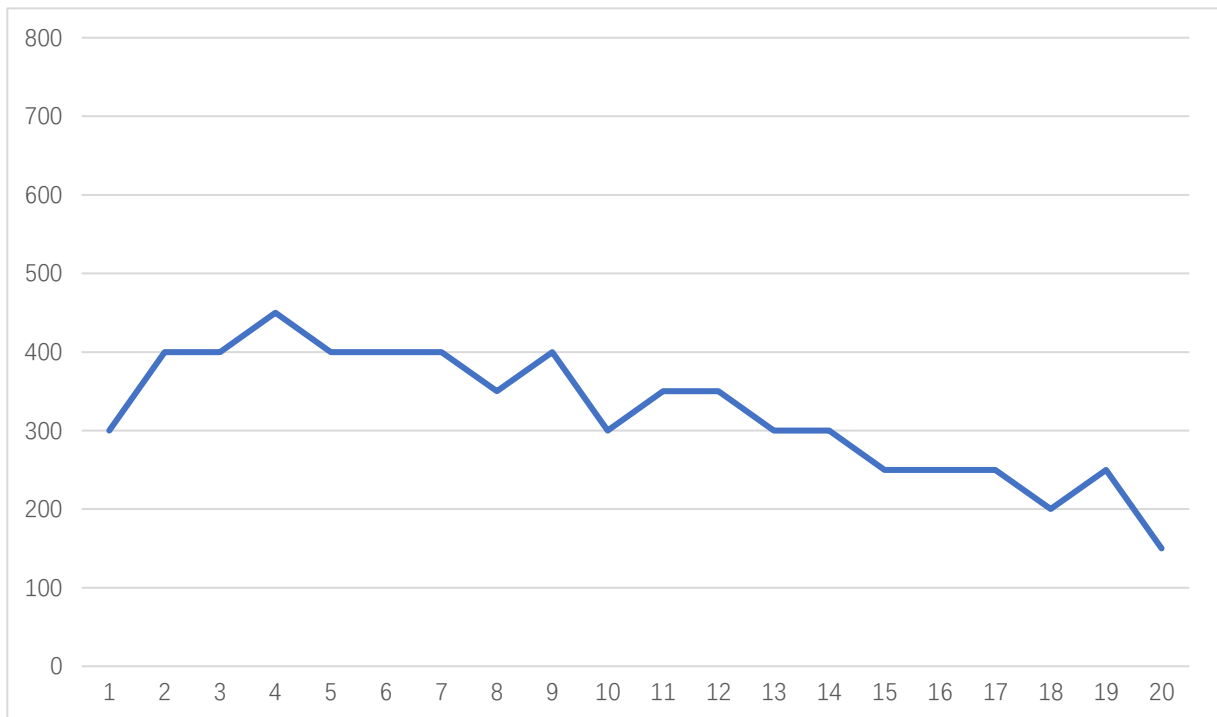


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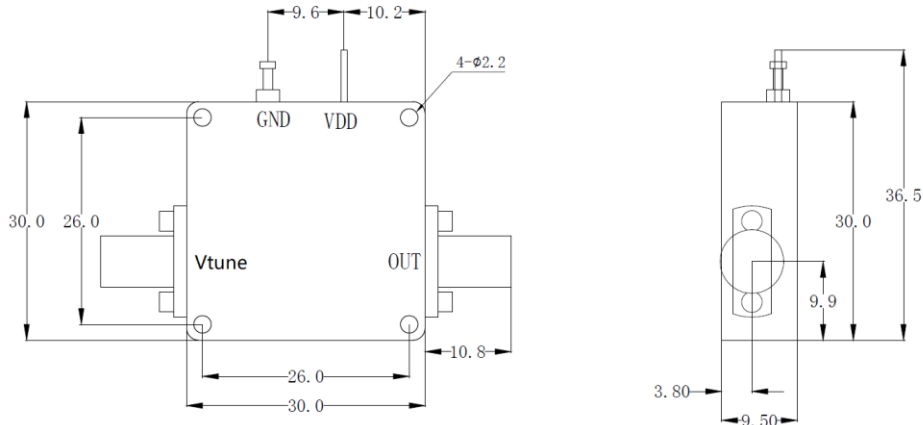
X2 Harmonics Suppression



Sensitivity vs Tuning Voltage

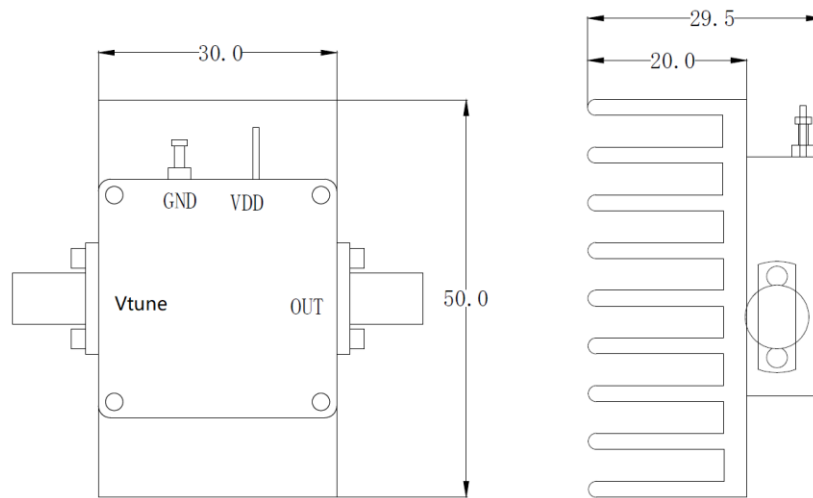


Dimension: (unit in mm)



	<26.5GHz	<40GHz	<50GHz	<67GHz
Connector	SMA	2.92mm	2.4mm	1.85mm
Lenth of a	9.4mm	9.5mm	10.8mm	11.3mm

Note: Female Default. Contact with us for other types.



Including a small heatsink without Fan if output Power higher than +20dBm.
Customers can remove it or use their own heatsink according to actual situation.

Heat Sink Required If Case Temp Higher Than 50C

