

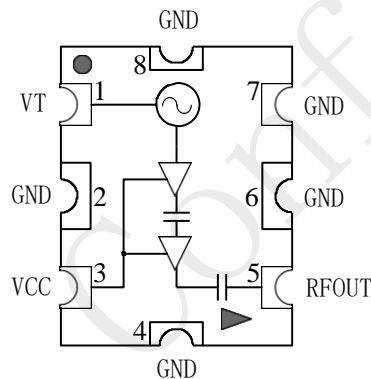


DPV31717 — Voltage Controlled Oscillator, 1699–1735MHz

Features

- Standard Frequency Range: 1699-1735MHz
- Pout: 0dBm(Typ)
- Ripple(BW \leq 36MHz): \pm 3dB
- Supply Voltage(VCC): 3.3V(Typ)
- Tune Voltage(VT): 0.5~ 2.8V
- Supply Current: 17mA(Typ)
- Harmonic Suppression(2nd): \leq -10dBc
- Harmonic Suppression(3rd): \leq -15dBc
- 7mm \times 9mm \times 2mm SMT Package

Functional Block Diagram



Product Description

The DPV31717 is VCO Module with resonators, negative resistance devices, varactor diodes, buffer amplifiers, filters and active biasing network. The DPV31717's phase noise performance and harmonic suppression is excellent due to the filters and monolithic structure. The DPV31717 is packaged in an low cost leadless 7x9 surface mount package.



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1 Product Description

The DPV31717 is VCO Module with resonators, negative resistance devices, varactor diodes, buffer amplifiers, filters and active biasing network. The DPV31717's phase noise performance and harmonic suppression is excellent due to the filters and monolithic structure. The DPV31717 is packaged in an low cost leadless 7x9 surface mount package.

2 Functional Block Diagram

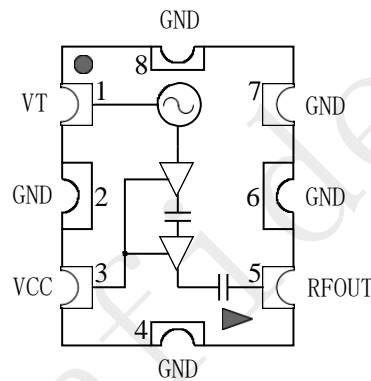


Figure 1 Functional Block Diagram

3 Features

- Standard Frequency Range: 1699-1735MHz
- Pout: 0dBm(Typ)
- Ripple(BW≤36MHz): ±3dB
- Supply Voltage(VCC): 3.3V(Typ)
- Tune Voltage(VT): 0.5~ 2.8V
- Supply Current: 12mA(Typ)
- Harmonic Suppression(2nd): ≤ -10dBc
- Harmonic Suppression(3rd): ≤ -15dBc
- 7mm×9mm×2mm SMT Package



4 Pin Description

Pin No.	Symbol	Description	Pin No.	Symbol	Description
1	VT	Tune voltage	5	RFOUT	RF output
2	GND	Ground connect	6	GND	Ground connect
3	VCC	Supply voltage	7	GND	Ground connect
4	GND	Ground connect	8	GND	Ground connect

5 Absolute Maximum Ratings

Parameter	Rating	Unit	Parameter	Rating	Unit
Tune Voltage	0 ~ 9	V	Storage Temperature	-40 ~ +150	°C
Supply Voltage	2.5 ~ 5.5	V	Relative Humidity	<80%	RH
Operating Ambient Temperature	-30 ~ +85	°C	Atmospheric Pressure	85 ~ 106	KPa

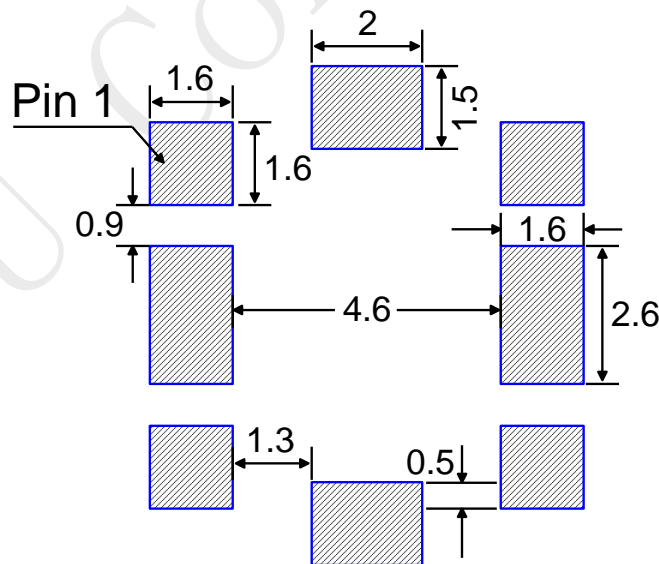
6 Electrical Specifications

Parameter	Specification			Unit	Condition (Temp=+25°C)
	Min.	Typ.	Max.		
Lower Frequency			1699	MHz	VT=0.5V
Upper Frequency	1735			MHz	VT=2.8V
Tuning Sensitivity		30		MHz/V	
Power Output	-3	0	3	dBm	



Supply Voltage	3.15	3.3	3.45	V	
Supply Current	15	17	18	mA	VCC=3.3V
Leakage Current(VT)			5	μA	VT=2.8V
Pushing			2	MHz	VCC=3.3±0.15V
Pulling			2	MHz	VSWR=2:1
Load Impedance		50		Ω	
Harmonic(2nd)			-10	dBc	
Harmonic(3rd)			-15	dBc	
SSB Phase Noise			-103	dBc/Hz	25kHz Offset
			-116	dBc/Hz	50kHz Offset

7 PCB Land Pattern



UNIT: mm