

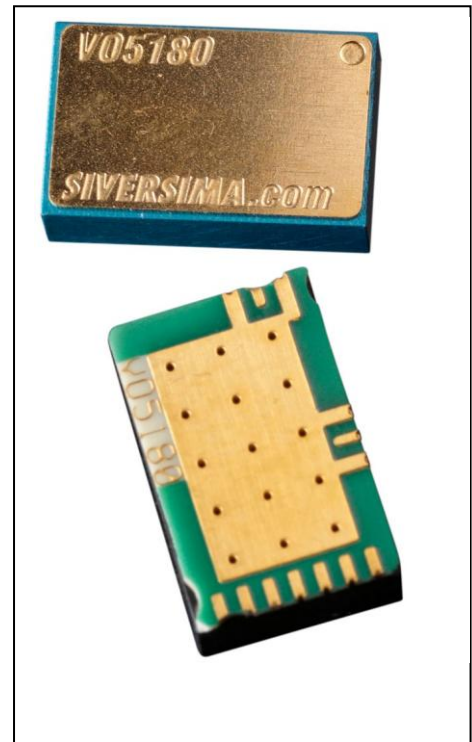
Wide Band VCO

13.5 to 20 GHz

Electrical specification

Type number	VO5180P/00			
Package	SMD, Blue			
Parameter	Min.	Typ.	Max.	Unit
Frequency range*	13.5		20	GHz
Output power RF1*		8		dBm
Output power RF2I*		-2		dBm
Power vs. frequency*		3		dB
Power vs. temperature		2		dB
Temperature drift		2	3	MHz/°C
2:nd harmonic		-30	-25	dBc
Spurious			-60	dBc
FM noise (SSB) 100 kHz 1MHz		-82 -105		dBc/Hz dBc/Hz
Tuning voltage*	0		+20	V
Tuning sensitivity*	100		600	MHz/V
Non-linearity			±10	%
Pulling, VSWR 1.5:1		±2		MHz
Pushing 7.8-8.2 V		25		MHz/V
Slew rate	20			GHz/μs
Modulation bandwidth	10			MHz
PTD 1μs to 1s after freq. jump			±25	MHz

T_a = 25°C, unless otherwise stated.



Interface/environmental specification

Parameter	Min.	Max.	Unit
Bias voltage	7.6	8.2	V
Bias current*		100	mA
Tuning voltage (damage level)		21	V
Operating temperature	-45	+70	°C
Storage temperature	-50	+100	°C

Absolute Maximum Ratings

Parameter	Min	Max	Unit
Bias voltage damage level		10	V
Tuning Voltage damage level		21	V
Operating temperature	-50	+100	°C
Soldering temperature/time		235/15	°C/sec

Note:

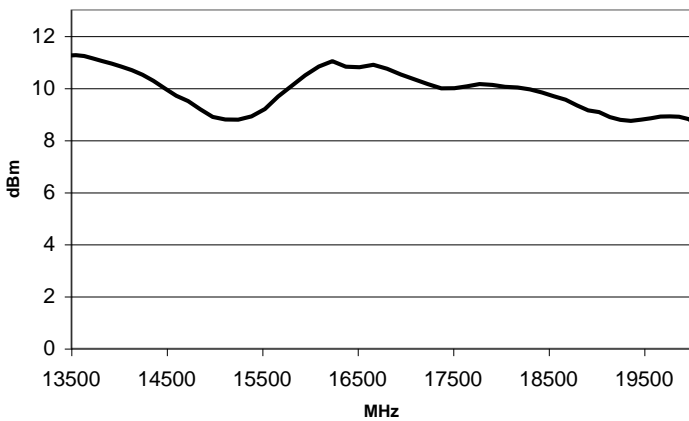
*100% tested and guaranteed values. Other data are indicative



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Wide Band VCO

Typical Pout vs. frequency

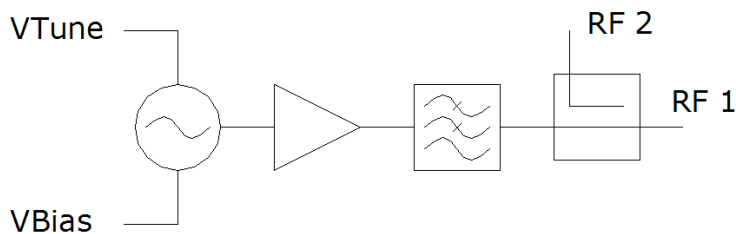


13.5 to 20 GHz

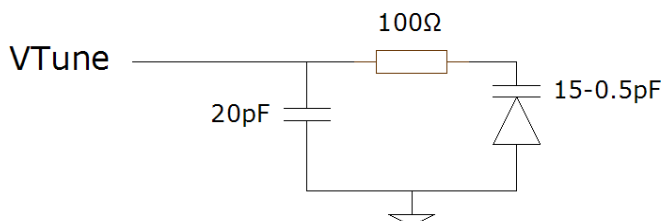
Typical Tuning sensitivity



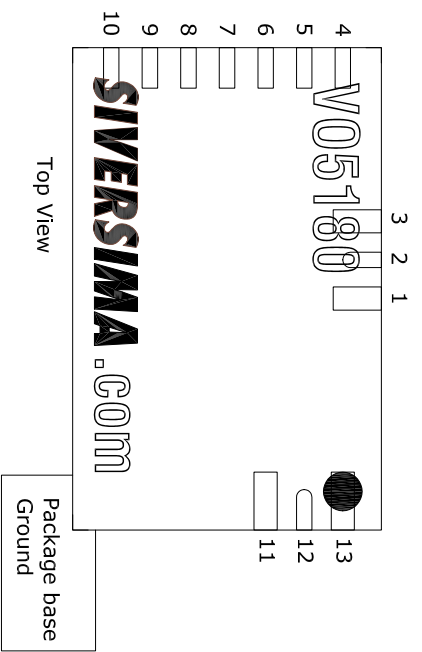
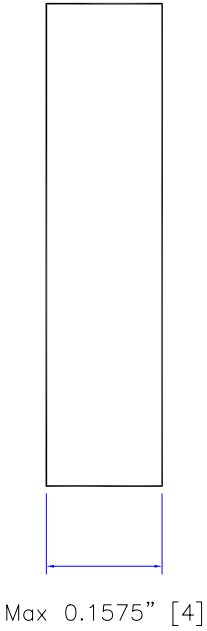
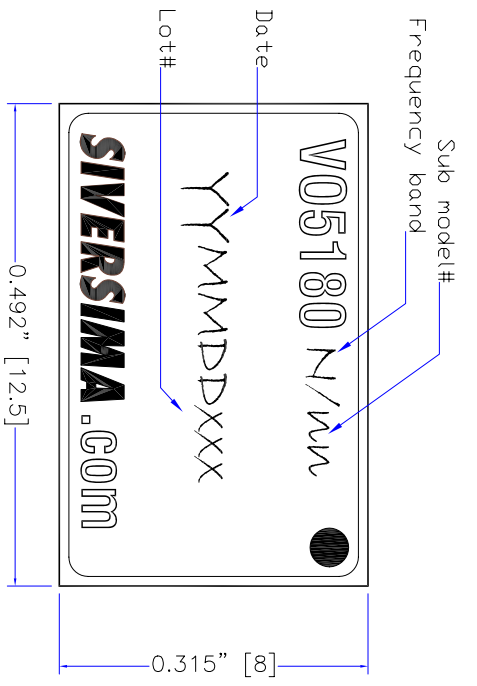
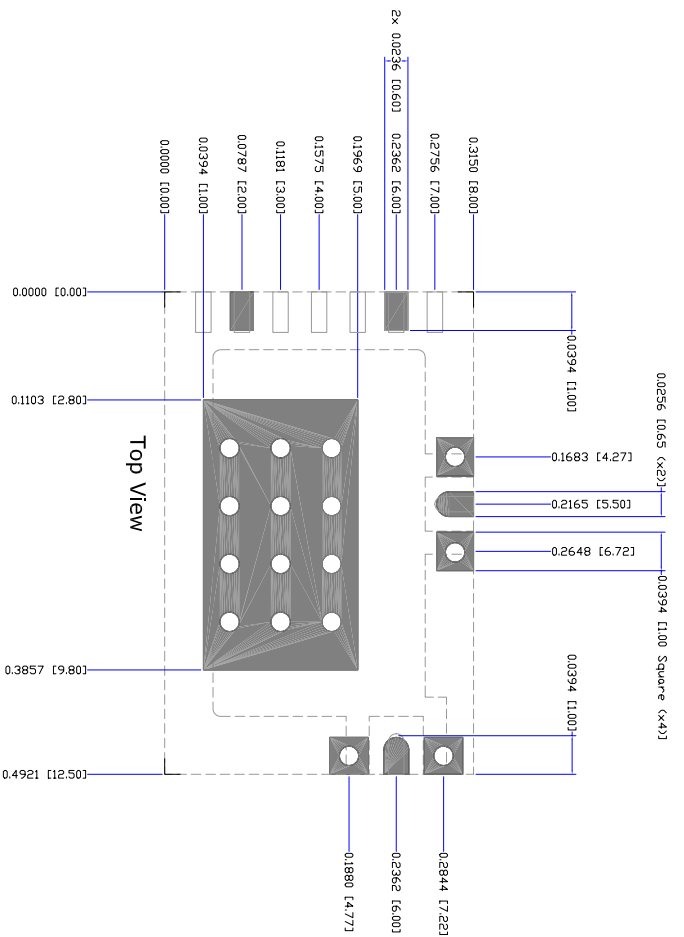
Simplified block diagram



Tuning input interface



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Pin	Designation	Remarks
1	GND	
2	RF2	
3	GND	
4	NC	Internally conn. to Pin 5
5	VTune	Floating
6	NC	Floating
7	NC	Floating
8	NC	Floating
9	VBIAS	No internal regulator
10	NC	Internally conn. to Pin 9
11	GND	
12	RF1	
13	GND	
Base	GND	Heatsink Max 0.8W

All dimensions in inches [mm]

Material/Alloy		Dimension		Gen. Tolerance		Arm		Scale	
Design by	RC	Drawn by	RC	Checked	Approved	Dot.	Ytben./Finish	Black / Gold	File
SIVERSIMA		Footprint		V05180		Sheet 1-1		Date 100908	
SIVERSIMA		Footprint		V05180		Rit./Drawing no.		DV05180_D	
								5:1	
								CAD-format A4	

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