

Valon Technology 5003 RF/IF Synthesizer Module

The 5003 synthesizer module is a complete frequency source suitable for high quality clock, carrier or local oscillator frequency generation applications.

Flash memory code loader allows user to select 1of 16 pre-programmed RF and IF frequency pairs. Modules are shipped with your frequency selection programmed. Modules can be returned for free reprogramming at any time (plus shipping).



Parameter	Min	Typical	Max	Units	Notes
RF output frequency range	900	-	1100	MHz	Select 16 frequencies withing +/- 10% of the mean frequency
IF output frequency range (optional)	440	-	550	MHz	Select 16 frequencies withing +/- 10% of the mean frequency
RF output Power	4	7	8	dBm	Vin > 5 volts
IF output power	5	7	8	dBm	Vin > 5 volts
RF frequency increment					
RF <1800MHz	10	-	-	kHz	Example: 1555.160MHz
RF <1300MHz	5	-	-	kHz	Example: 881.015
IF frequency increment					
IF<1000MHz	20			kHz	Example: 925.420MHz
IF<500MHz	10			kHz	Example: 462.710MHz
IF<250MHz	5			kHz	Example: 231.355MHz
IF<125MHz	2.5			kHz	Example: 115.6775MHz
IF<62.5MHz	1.25			kHz	Example: 57.83875MHz
Phase Noise					
RF output 10kHz		-88	<-85	dBc/Hz	
RF output 100kHz		-110	<-105	dBc/Hz	
IF output 10kHz		-100	<-95	dBc/Hz	
IF output 100kHz		-120	<-115	dBc/Hz	
Internal Reference (13MHz option)					
Calibration			<+/-2.5	ppm	
Temp. stability (0-70deg. C.)			<+/-2.5	ppm	
Internal Reference 10MHz (standard)					
Calibration			<+/- 50	ppm	
Temp. stability (0-70deg. C.)			<+/-50	ppm	Includes initial calibration error at 25 deg. C.
External Reference Input					
	4	-	20	MHz	The internal reference can be disabled and an external reference frequency can be applied
	200	-	3000	mV pk-pk	
Internal Reference Output					
	2.5	3.0	3.3	Vpk-pk	Open circuit, approximately +7dBm in 50 ohms
Power Requirements					
Volts dc	6.0		15.0	Vdc	(can be operated down to 3.6V with reduced output power)
current		82		mA	For units with RF and IF outputs
current		57		mA	For units with RF output only
current		35		mA	For RF or IF only units with external reference
current		42		mA	For RF or IF only units with internal reference
Connectors					
RF	SMA Female				
Power	2mm Hirose				
Dimensions					
Length		2.00		Inches	
Width		1.50		Inches	
Height		0.10		Inches	

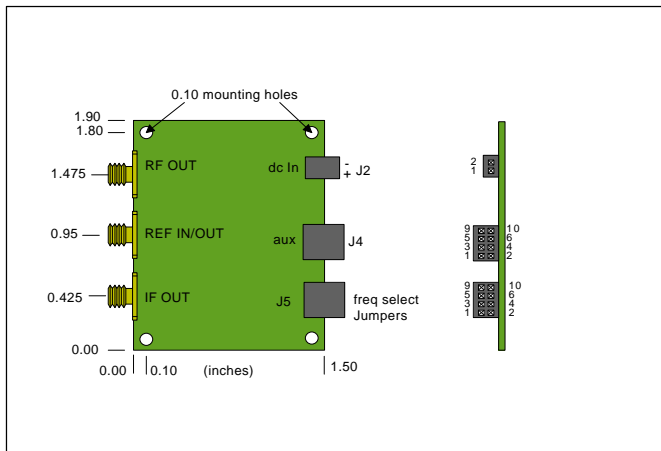
Connectors

J2-1	dc power input positive	6.0 to 15.0V dc input
J2-2	dc power input ground	

J4-1	NC	J4 is used for uC programming
J4-2	Lock detector output	
J4-3	NC	
J4-4	Reset, active low	
J4-5	NC	
J4-6	NC	
J4-7	NC	
J4-8	Ground	

J5-1	A3	Jumper 3	Open jumpers are logic "1" bits. All jumpers removed is address 15 all jumper in place is address 0
J5-2	Ground	Jumper 2	
J5-3	A2		
J5-4	Ground	Jumper 1	
J5-5	A1		
J5-6	Ground	Jumper 0	
J5-7	A0		
J5-8	Ground		

Connectors and Mounting locations



Block Diagram

