

Engineering Development Model

Frequency Synthesizer

SSN-EDR9582

Important Note

This model has been designed, built and tested in our engineering department. Performance data represents model capability. At present it is a non-catalog model. On request, we can supply a final specification sheet, part number and price/delivery information.



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CASE STYLE : KJ1367

ELECTRICAL SPECIFICATIONS 50Ω, over -40°C to +85°C				
Parameter	Min.	Typ.	Max.	Units
Frequency	1542		1557	MHz
Step size		200		kHz
Settling Time Within ±1kHz		2		msec
Output Power	0	+4	+7	dBm
Phase Noise				
at 100 Hz offset		-90		dBc/Hz
at 1 kHz offset		-98		dBc/Hz
at 10 KHz offset		-101	-95	dBc/Hz
at 100 KHz offset		-127	-122	dBc/Hz
at 1000 kHz offset		-148	-142	dBc/Hz
Integrated SSB Phase Noise		-57		dBc
Reference Spurious Suppression		-87		dBc
Comparison Spurious Suppression		-90		dBc
0.5 Step size Spurious Suppression		-104		dBc
Non-Harm. Spurious Suppression		-90		dBc
Harmonic Suppression		-30	-21	dBc
Supply voltage VCO		4.75		V
PLL		3.11		V
Supply current VCO		47	55	V
PLL		16	25	V
Reference In (External)				
Frequency		52		MHz
Amplitude		1		Vp-p
Impedance		100		kΩ
Ph. N @ 1kHz		-145		dBc/Hz
Input Logic Levels				
Logic high	1.4		3.11	V
Logic Low			0.6	V
Digital Lock Detect				
Locked	1.4		3.11	V
Unlocked			0.4	V
Frequency Synthesizer PLL		ADF4153		

ABSOLUTE MAXIMUM RATINGS	
Operating Temperature	-45°C to 85°C
Storage Temperature	-55°C to 100°C
VCO Supply Voltage	5.75V
PLL Supply Voltage	4.11V
Reference Frequency voltage	3.6Vp-p
Data, Clock & LE levels	3.41V

Power On sequence: Vcc VCO followed by Vcc PLL
Power Off sequence: Vcc PLL followed by Vcc VCO

PIN CONNECTIONS			
RF OUT	9	CLOCK	1
VCC VCO	7	DATA	2
VCC PLL	12	LATCH ENABLE	3
REF IN	4	GROUND	5,6,8,10
LOCK DETECT	11		

Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
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