

Engineering Development Model

Frequency Synthesizer

DSN-EDR8382

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 : LK942

ELECTRICAL SPECIFICATIONS 50Ω, over -45°C to +70°C				
Parameter	Min.	Typ.	Max.	Units
Frequency	3040		3540	MHz
Step size		125		kHz
Settling Time Within ±1kHz		5		msec
Output Power	-6	-2	+2	dBm
Phase Noise				
at 100 Hz offset		-79		dBc/Hz
at 1 kHz offset		-76	-70	dBc/Hz
at 10 KHz offset		-87	-81	dBc/Hz
at 100 KHz offset		-117		dBc/Hz
at 1000 kHz offset		-137	-131	dBc/Hz
Integrated SSB Phase Noise		-37		dBc
Comparison Spurious Suppression		-86		dBc
0.5 Step size Spurious Suppression		-106		dBc
Non-Harm. Spurious Suppression		-90		dBc
Harmonic Suppression		-28		dBc
Supply voltage VCO		5		V
Supply voltage PLL		15		V
Supply current VCO		48	57	mA
Supply current PLL		14	22	mA
Reference In (External)				
Frequency		81		MHz
Amplitude		1		Vp-p
Impedance		100		kΩ
Ph. N @ 1kHz		-145		dBc/Hz
Input Logic Levels	Logic high 1.4		3.3	V
Logic Low			0.6	
Digital Lock Detect	Locked 1.4		3.3	V
Unlocked			0.4	
Frequency Synthesizer PLL	ADF4153			

ABSOLUTE MAXIMUM RATINGS	
Operating Temperature	-50°C to 85°C
Storage Temperature	-55°C to 100°C
VCO Supply Voltage	6V
PLL Supply Voltage	16V
Reference Frequency voltage	3.6Vp-p
Data, Clock & LE levels	3.6V

Power On sequence: Vcc VCO followed by Vcc PLL

Power Off sequence: Vcc PLL followed by Vcc VCO

PIN CONNECTIONS			
RF OUT	5	CLOCK	11
VCC VCO	16	DATA	9
VCC PLL	18	LATCH ENABLE	12
REF IN	14	GROUND	2,4,6,8,13,14
LOCK DETECT	7		

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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