

Engineering Development Model

Frequency Synthesizer

KSN-EDR10082

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 : DK1042

ELECTRICAL SPECIFICATIONS 50Ω, over -40°C to +85°C				
Parameter	Min.	Typ.	Max.	Units
Frequency	930		1470	MHz
Step size		0.0003		kHz
Settling Time Within ±1kHz		350		μsec
Output Power	-5	0	+5	dBm
Phase Noise				
at 100 Hz offset		-85		dBc/Hz
at 1 kHz offset		-90		dBc/Hz
at 10 KHz offset		-91		dBc/Hz
at 100 KHz offset		-88		dBc/Hz
at 1000 kHz offset		-108	-102	dBc/Hz
Integrated SSB Phase Noise		-34		dBc
Ref & Comp Spurious Suppression		-102		dBc
0.5 Step size Spurious Suppression		-57		dBc
Non-Harm. Spurious Suppression		-90		dBc
Harmonic Suppression		-14		dBc
Supply voltage VCO		12		V
PLL		3.3		V
Supply current VCO		32	41	V
PLL		19	27	V
Reference In (External) Frequency		10		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	V
Digital Lock Locked	2.9		3.3	V
Detect Unlocked			0.4	V
Frequency Synthesizer PLL	ADF4157			

ABSOLUTE MAXIMUM RATINGS	
Operating Temperature	-45°C to 85°C
Storage Temperature	-55°C to 100°C
VCO Supply Voltage	13V
PLL Supply Voltage	4.3V
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	7	CLOCK	10
VCC VCO	5	DATA	11
VCC PLL	1	LATCH ENABLE	12
REF IN	3	GROUND	2,4,6,8,13,14
LOCK DETECT	9		

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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