

Engineering Development Model

Frequency Synthesizer

KSN-EDR9014

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 -5°C to +55°C				
Parameter	Min.	Typ.	Max.	Units
Frequency	1462		1487	MHz
Step size		250		kHz
Settling Time Within ±1kHz		11		msec
Output Power	+3	+6	+10	dBm
Phase Noise				
at 100 Hz offset		-85		dBc/Hz
at 1 kHz offset		-94	-90	dBc/Hz
at 10 kHz offset		-108	-105	dBc/Hz
at 100 kHz offset		-133	-129	dBc/Hz
at 1000 kHz offset		-154	-150	dBc/Hz
Integrated SSB Phase Noise		-55		dBc
Ref & Comp Spurious Suppression		-90		dBc
0.5 Step size Spurious Suppression		-106		dBc
Non-Harm. Spurious Suppression		-90		dBc
Harmonic Suppression		-37	-30	dBc
Supply voltage VCO		5		V
Supply voltage PLL		3		V
Supply current VCO		60	68	mA
Supply current PLL		16	24	mA
Reference In (External) Frequency		25		MHz
Reference In (External) Amplitude		1		Vp-p
Reference In (External) Impedance		100		kΩ
Reference In (External) Ph. N @ 1kHz		-145		dBc/Hz
Input Logic Levels Logic high	1.4		3	V
Input Logic Levels Logic Low			0.6	V
Digital Lock Detect Locked	1.4		3	V
Digital Lock Detect 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	6V
PLL Supply Voltage	4V
Reference Frequency voltage	3.6Vp-p
Data, Clock & LE levels	3.3V

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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