

Engineering Development Model

Frequency Synthesizer

KSN-EDR10139

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 -45°C to +85°C				
Parameter	Min.	Typ.	Max.	Units
Frequency	1090		1090	MHz
Step size		10000		kHz
Settling Time Within ±1kHz		25		msec
Output Power	+4	+7	+11	dBm
Phase Noise				
at 100 Hz offset		-82		dBc/Hz
at 1 kHz offset		-99	-94	dBc/Hz
at 10 KHz offset		-104	-100	dBc/Hz
at 100 KHz offset		-99	-120	dBc/Hz
at 1000 kHz offset		-156	-151	dBc/Hz
Integrated SSB Phase Noise		-57		dBc
Reference Spurious Suppression		-98		dBc
Comparison Spurious Suppression		-98		dBc
Non-Harm. Spurious Suppression		-90		dBc
Harmonic Suppression		-29	-23	dBc
Supply voltage VCO		5		V
Supply voltage PLL		5		V
Supply current VCO		56	64	V
Supply current PLL		17	25	V
Reference In (Internal)				
Frequency		20		MHz
Amplitude		1		Vp-p
Impedance		100		kΩ
Ph. N @ 1kHz		-145		dBc/Hz
Digital Lock Detect	Locked	4.6	5	V
	Unlocked		0.4	
Frequency Synthesizer PLL	Self-programmed (internal microcontroller)			

ABSOLUTE MAXIMUM RATINGS

Operating Temperature	-45°C to 85°C
Storage Temperature	-55°C to 100°C
VCO Supply Voltage	6V
PLL Supply Voltage	6V

Power On sequence: Vcc VCO followed by Vcc PLL

Power Off sequence: Vcc PLL followed by Vcc VCO

PIN CONNECTIONS

RF OUT	7	N.C	3,10,11,12
VCC VCO	5	GROUND	2,4,6,8,13,14
VCC PLL	1		
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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