

Engineering Development Model

Frequency Synthesizer

DSN-EDR8717

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 : KL942

ELECTRICAL SPECIFICATIONS 50Ω, over -45°C to +70°C				
Parameter	Min.	Typ.	Max.	Units
Frequency	900		2000	MHz
Step size		250		kHz
Settling Time Within ±1kHz		3		msec
Output Power	-7	-2	+2	dBm
Phase Noise				
at 100 Hz offset		-83		dBc/Hz
at 1 kHz offset		-87		dBc/Hz
at 10 kHz offset		-82		dBc/Hz
at 100 kHz offset		-109		dBc/Hz
at 1000 kHz offset		-140		dBc/Hz
Integrated SSB Phase Noise		-40		dBc
Reference Spurious Suppression		-99		dBc
Comparison Spurious Suppression		-116		dBc
Non-Harm. Spurious Suppression		-90		dBc
Harmonic Suppression		-25		dBc
Supply voltage				
VCO		10		V
PLL		19		V
Supply current				
VCO		50	59	mA
PLL		16	25	mA
Reference In (External)				
Frequency		10		MHz
Amplitude		1		Vp-p
Impedance		100		kΩ
Ph. N @ 1kHz		-145		dBc/Hz
Input Logic Levels				
Logic high	2.4		3	V
Logic Low			0.6	V
Digital Lock Detect				
Locked	2.6		3	V
Unlocked			0.4	V
Frequency Synthesizer PLL		ADF4113		

ABSOLUTE MAXIMUM RATINGS	
Operating Temperature	-45°C to 85°C
Storage Temperature	-55°C to 100°C
VCO Supply Voltage	11V
PLL Supply Voltage	20V
Reference Frequency voltage	5.8Vp-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	5	CLOCK	11
VCC VCO	16	DATA	9
VCC PLL	18	LATCH ENABLE	12
REF IN	14	GROUND	1-4,6,8,10,13
LOCK DETECT	7		15,17,19-22

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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