

Engineering Development Model

Frequency Synthesizer

DSN-EDR10553

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 : KL1294

ELECTRICAL SPECIFICATIONS 50Ω, over -45°C to +85°C				
Parameter	Min.	Typ.	Max.	Units
Frequency	3700		4300	MHz
Step size		10000		kHz
Settling Time Within ±1kHz		180		μsec
Output Power	+4	+8	+12	dBm
Phase Noise				
at 100 Hz offset		-87		dBc/Hz
at 1 kHz offset		-94		dBc/Hz
at 10 kHz offset		-94		dBc/Hz
at 100 kHz offset		-104		dBc/Hz
at 1000 kHz offset		-135	-130	dBc/Hz
Integrated SSB Phase Noise		-44		dBc
Reference Spurious Suppression		-96		dBc
Comparison Spurious Suppression		-101		dBc
Non-Harm. Spurious Suppression		-90		dBc
Harmonic Suppression		-36		dBc
Supply voltage				V
VCO		10		V
PLL		14		V
Supply current				V
VCO		47	55	V
PLL		27	35	V
Reference In (External)				MHz
Frequency		960		MHz
Amplitude		1		Vp-p
Impedance		100		kΩ
Ph. N @ 1kHz		-145		dBc/Hz
Input Logic Levels				V
Logic high	2.64		3.3	V
Logic Low			0.66	V
Digital Lock Detect				V
Locked	2.9		3.3	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	15V
Reference Frequency voltage	5.8Vp-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	3	CLOCK	10
VCC VCO	5	DATA	11
VCC PLL	1	LATCH ENABLE	12
REF IN	7	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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