

Engineering Development Model

Frequency Synthesizer

TSN-EDR10938/1

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 : 99-01-1777

ELECTRICAL SPECIFICATIONS 50Ω, over -45°C to +85°C				
Parameter	Min.	Typ.	Max.	Units
Frequency	1970		2250	MHz
Step size		10000		kHz
Settling Time Within ±1kHz		2.5		msec
Output Power	+10	+14	+18	dBm
Phase Noise				
at 100 Hz offset		-89		dBc/Hz
at 1 kHz offset		-98		dBc/Hz
at 10 KHz offset		-99		dBc/Hz
at 100 KHz offset		-121	-116	dBc/Hz
at 1000 kHz offset		-144	-138	dBc/Hz
Integrated SSB Phase Noise		-53		dBc
Ref & Comp Spurious Suppression		102		dBc
Non-Harm. Spurious Suppression		-90		dBc
Harmonic Suppression		-33	-24	dBc
Supply voltage	VCO	5		V
	PLL	3		V
Supply current	VCO	59	68	mA
	PLL	11	19	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	1.4	3	V
	Logic Low		0.6	V
Digital Lock Detect	Locked	2.6	3	V
	Unlocked		0.4	V
Frequency Synthesizer PLL	ADF4106			

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	13	CLOCK	2
VCC VCO	14	DATA	3
VCC PLL	15	LOAD ENABLE	4
REF IN	16	V-TUNE MONITOR	5
LOCK DETECT	1	GROUND	6-12,17-22

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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