Engineering Development Model

Frequency Synthesizer

SSN-EDR9434

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 : 99-01-796

ELECTRICAL SPECIFICATIONS 50Ω, over -45°C to +85°C					
Parameter		**Min.**	**Typ.**	**Max.**	**Units**
Frequency		3100		3100	MHz
Step size			10000		kHz
Settling Time	Within ±1kHz		29		msec
Output Power		-3	0	+4	dBm
Phase Noise					
	at 100 Hz offset		-82		dBc/Hz
	at 1 kHz offset		-97	-94	dBc/Hz
	at 10 KHz offset		-99	-95	dBc/Hz
	at 100 KHz offset		-106	-102	dBc/Hz
	at 1000 kHz offset		-138	-134	dBc/Hz
Integrated SSB Phase Noise			-50		dBc
Reference Spurious Suppression			-104		dBc
Comparison Spurious Suppression			-108		dBc
Non-Harm. Spurious Suppression			-90		dBc
Harmonic Suppression			-24		dBc
Supply voltage	VCO		5		V
	PLL		3		V
Supply current	VCO		46	54	mA
	PLL		11	19	mA
Reference In (External)	Frequency		20		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	
Digital Lock Detect	Locked	2.6		3	V
	Unlocked			0.4	
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	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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