

Engineering Development Model

Frequency Synthesizer

RSN-EDR10612

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 : JG1228

ELECTRICAL SPECIFICATIONS 50Ω, over -40°C to +85°C				
Parameter	Min.	Typ.	Max.	Units
Frequency	1380		1380	MHz
Step size		20000		kHz
Settling Time Within ±1kHz		1.5		msec
Output Power	+4	+7	+11	dBm
Phase Noise				
at 100 Hz offset		-96		dBc/Hz
at 1 kHz offset		-104		dBc/Hz
at 10 KHz offset		-105	-99	dBc/Hz
at 100 KHz offset		-132	-126	dBc/Hz
at 1000 kHz offset		-153	-147	dBc/Hz
Integrated SSB Phase Noise		-61		dBc
Reference Spurious Suppression		-92		dBc
Comparison Spurious Suppression		-38		dBc
Non-Harm. Spurious Suppression		-90		dBc
Harmonic Suppression		-34	-28	dBc
Supply voltage VCO		5		V
Supply voltage PLL		3.3		V
Supply current VCO		47	55	V
Supply current PLL		21	29	V
Reference In Frequency		960		MHz
Reference In Amplitude		1		Vp-p
Reference In Impedance		100		kΩ
Reference In Ph. N @ 1kHz		-145		dBc/Hz
Digital Lock Detect Locked	2.9		3.3	V
Digital Lock Detect Unlocked			0.4	V
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	4.3V
Reference Frequency voltage	3.6Vp-p

Power On sequence: Vcc VCO followed by Vcc PLL

Power Off sequence: Vcc PLL followed by Vcc VCO

PIN CONNECTIONS			
RF OUT	4	N.C	8,9,10,16,18
VCC VCO	19	GROUND	1,2,3,5,6,11,
VCC PLL	17		13,14,15,20
REF IN	12		
LOCK DETECT	7		

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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