

Engineering Development Model

Frequency Synthesizer

TSN-EDR11165

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 : 99-01-1895

ELECTRICAL SPECIFICATIONS 50Ω, over -45°C to +85°C				
Parameter	Min.	Typ.	Max.	Units
Frequency	374		374	MHz
Step size		2000		kHz
Settling Time Within ±1kHz		1.5		msec
Output Power	+4	+7	+11	dBm
Phase Noise				
at 100 Hz offset		-101		dBc/Hz
at 1 kHz offset		-106	-100	dBc/Hz
at 10 KHz offset		-117	-111	dBc/Hz
at 100 KHz offset		-142	-136	dBc/Hz
at 1000 kHz offset		-161	-156	dBc/Hz
Integrated SSB Phase Noise		-67		dBc
Reference Spurious Suppression		-98		dBc
Comparison Spurious Suppression		-36		dBc
Non-Harm. Spurious Suppression		-90		dBc
Harmonic Suppression		-28	-21	dBc
Supply voltage VCO		5		V
Supply voltage PLL		5		V
Supply current VCO		43	51	mA
Supply current PLL		10	18	mA
Reference In (External) Frequency		10		MHz
Amplitude		1		Vp-p
Impedance		100		kΩ
Ph. N @ 1kHz		-145		dBc/Hz
Digital Lock Detect Locked	4.6		5	V
Unlocked			0.4	
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	6V
Reference Frequency voltage	5.8Vp-p

Power On sequence: Vcc VCO followed by Vcc PLL

Power Off sequence: Vcc PLL followed by Vcc VCO

PIN CONNECTIONS

RF OUT	11	REF IN	1
VCC VCO	9	LOCK DETECT	16
VCC PLL	15	GROUND	2-8,10,12-14

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.
 C. The parts covered by this specification document are subject to Mini-Circuits' standard limited warranty and terms and conditions (collectively, "Standard Terms"). Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCStore/terms.jsp

