Coaxial
Power Detector

50Ω, -60dBm to +5dBm, 10 to 8000 MHz

Maximum Ratings
- Operating Temperature: -40°C to 85°C
- Storage Temperature: -55°C to 100°C
- DC Power:
  - Max. voltage: 5.7V
  - Max. current: 120mA
  - Internal Power Dissipation: 0.73W
- Input Power: +15dBm

Permanent damage may occur if any of these limits are exceeded.

Coaxial Connections
- RF IN
- DC OUT
- Vcc (+5V)
- TEMPERATURE SENSOR
- GROUND

Outline Drawing

Outline Dimensions (mm)

Simplified Functional Diagram

Output Voltage Vs Input Power @ +25°C

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/MCLStore/terms.jsp

Electrical Specifications (T_Amb = 25°C)

- Low Noise DC Output for ZX47-60LN+,
- 20mVp-p Typ. @ 10MHz
- High Dynamic Range
- Wide Bandwidth
- Single Supply Voltage: +5V
- Stability Over Temperature
- Built-in Temperature Sensor
- Protected by US patent 6,790,049

Applications
- RF/IF Power Measurements
- Low Cost Power Monitoring System
- RF Leakage Monitors
- Fast feedback Levelling Circuits
- RF Power Control
- Receiver RF/IF Gain Control
- RSSI measurements

+RoHS Compliant
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications
Performance Curves

ZX47-60+
ZX47-60LN+

Power Input Deviation from Ideal Vs Output Voltage @ Freq 10MHz

Power Input Deviation from Ideal Vs Output Voltage @ Freq 2000MHz

Power Input Deviation from Ideal Vs Output Voltage @ Freq 6000MHz

Power Input Deviation from Ideal Vs Output Voltage @ Freq 8000MHz

Output Voltage Change Vs Freq Over Temperature Range

Output Voltage Change Vs Freq Over Temperature Range

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/MCLStore/terms.jsp
Performance Curves

ZX47-60+
ZX47-60LN+

Slope Vs Input Power Over Temperature Range @ Freq 10MHz

Slope Vs Freq Over Temperature Range @ Input Power -50dBm

Slope Vs Input Power Over Temperature Range @ Freq 5000MHz

Slope Vs Freq Over Temperature Range @ Input Power -25dBm

Slope Vs Input Power Over Temperature Range @ Freq 8000MHz

Slope Vs Freq Over Temperature Range @ Input Power -5dBm

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-Circuit’s 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/MCLStore/terms.jsp

www.minicircuits.com  P.O. Box 350166, Brooklyn, NY 11235-0003  (718) 934-4500  sales@minicircuits.com
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-Circuit's 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/MCLStore/terms.jsp

Performance Curves

**ZX47-60+**

**ZX47-60LN+**

---

**Output Voltage Change Vs Input Power**

*Over Temperature Range*

@ Freq 2000MHz

- Output Voltage Deviation @ -40°C relative to +25°C
- Output Voltage Deviation @ +85°C relative to +25°C

**VSWR Vs Freq**

*Over Temperature Range*

- -40°C
- +25°C
- +85°C

**Temperature Sensor Voltage**

*Vs Ambient Temperature*

www.minicircuits.com  P.O. Box 350166, Brooklyn, NY 11235-0003  (718) 934-4500  sales@minicircuits.com