



MEDIUM POWER, HIGH GAIN

Wideband Amplifier

ZVA-02443HP+
ZVA-02443HPX+

50Ω 2 to 43.5 GHz

THE BIG DEAL

- High Gain of 37 dB typ.
- Excellent gain flatness, ±2.0 dB typ.
- Saturated Output Power >=+20 dBm typ.
- Available with and without heatsink
- Operates with a single DC supply of +9 to +15 V
- Over-Voltage and Reverse Voltage protected



Generic photo used for illustration purposes only

APPLICATIONS

- Wideband Test and Instrumentation
- 5G
- SATCOM
- EW

Model No.	ZVA-02443HP+	ZVA-02443HPX+▲
Case Style	T2704	
Connectors	2.92mm Female	

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

PRODUCT OVERVIEW

Mini-Circuits' ZVA-02443HP+ is a coaxial, medium power, wideband and high gain amplifier operating from 2 GHz to 43.5 GHz. The model operates over a single positive supply range of +9 to +15 V, allowing users to choose their desired operating voltage. Internal DC-DC conversion circuitry maintains constant efficiency over the full input voltage range. The amplifier incorporates several DC-protection features such as over-voltage, reverse voltage and In-rush current that protects the amplifier from damage if mishandled during operation. The Amplifier is capable of delivering about +20 dBm of saturated RF power over the entire band and has excellent Noise Figure performance of 3.5 dB, typ., up to 26.5 GHz. The wideband operation combined with a decent output power makes it an ideal choice for testing and instrumentation applications.

KEY FEATURES

Feature	Advantages
Wide-band amplifier, 2 to 43.5 GHz	A single amplifier serves the need for applications including Test & instrumentation, 5G bands (24 to 39 GHz), SATCOM, etc.
<ul style="list-style-type: none"> • High Gain • Wideband • Medium RF power 	The amplifier is capable of providing high gain of 37 dB typ. over the entire operating band with a good saturated RF power of +20 dBm typ.
Adjustable DC Supply voltage	The device is capable of operating from +9 to +15 V with constant DC power consumption with no effect on RF performance.
DC Protection <ul style="list-style-type: none"> • Over-voltage • Reverse voltage • In-rush current 	The internal DC circuitry allows the amplifier to be protected from any external mishandling that could lead to catastrophic failures in the field.

REV.B
ECO-008181
ZVA-02443HP+
AD/JM/CP/AM
210610





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Mini-Circuits

ELECTRICAL SPECIFICATIONS AT 25°C

Parameter	Condition (MHz)	ZVA-02443HP+ ZVA-02443HPX+▲			Units
		Min.	Typ.	Max.	
Frequency Range		2000		43500	MHz
Gain	2000 - 18000		39		dB
	18000 - 32000		37		
	32000 - 40000		36		
	40000 - 43500		35		
Input VSWR	2000 - 18000		1.5		:1
	18000 - 32000		1.3		
	32000 - 40000		1.6		
	40000 - 43500		1.9		
Output VSWR ²	2000 - 18000		1.7		:1
	18000 - 32000		2.1		
	32000 - 40000		2.3		
	40000 - 43500		2.6		
Output Power at 1dB compression	2000 - 18000		21		dBm
	18000 - 32000		17		
	32000 - 40000		16		
	40000 - 43500		15		
Output IP3	2000 - 18000		27		dBm
	18000 - 32000		23		
	32000 - 40000		21		
	40000 - 43500		20		
Noise Figure	2000-26500		3.5		dB
	26500-43500		6.0		
Operating DC Voltage		+9		+15	V
Device Operating Current at +9V ¹				500	mA
Device Operating Power at Operating DC Voltage		—	4.0	—	W

1. DC Supply must be able to source at least 550mA DC at startup.

2. Open and short-circuit loads and not recommended at the amplifier output. Ensure proper 50 Ohm load before turning the amplifier "ON".

MAXIMUM RATINGS^{3,4}

Parameter	Ratings
Operating Temperature (Ambient)	-40°C to +85°C
Storage Temperature	-55°C to +100°C
Total Power dissipation	4.5W
Input Power (CW)	+5 dBm
DC Voltage	+16V

3. For units without heat-sink, limit the maximum base-plate temperature to +45°C to ensure proper performance. Alternative heat sinking and heat removal can be provided by the user with max. thermal resistance of 1.8°C/W. This allows the max. ambient temperature to be +85°C

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



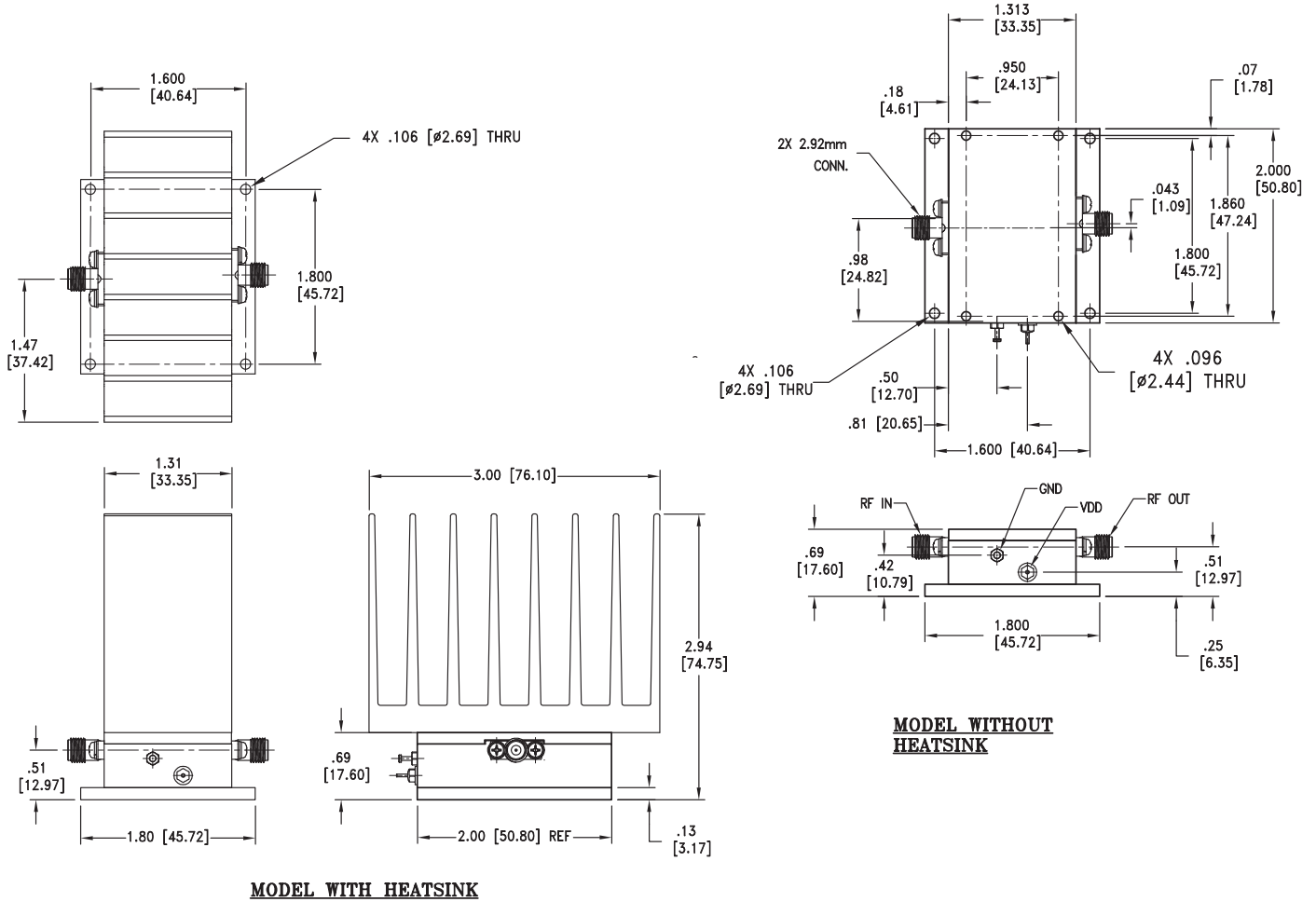


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OUTLINE DRAWING



Weight: 350 grams; Weight without heatsink: 220 grams

Dimensions are in inches (mm). Tolerances: 2 Pl.±.03; 3 Pl. ± .015