

## MEDIUM POWER, HIGH GAIN

## Wideband Amplifier zva-443HGX+

50Ω 10 MHz to 43.5 GHz<sup>1</sup>

## **THE BIG DEAL**

- High Gain of 33 dB typ.
- Output Power of +11 dBm typ. at saturation
- Operates with a single DC supply of +9 to +15 V
- Over-Voltage and Reverse Voltage protected

### **APPLICATIONS**

- Wideband Test and Instrumentation
- 5G
- SATCOM
- Optical communications



Generic photo used for illustration purposes only

Model No.	ZVA-443HGX+	
Case Style	T2704-1	
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-443HGX+ is a Coaxial, High Gain and General-Purpose Wideband amplifier operating from 10 MHz to 43.5 GHz1. 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 mishanded during operation. The Amplifier is capable of delivering over +11 dBm of saturated RF power over the entire band and has a good Noise figure performance of 3.5 dB, typ. up to 26.5 GHz. The Wideband operation combined with a High Gain makes this model an ideal choice for testing and instrumentation applications.

### **KEY FEATURES**

Feature	Advantages		
Wide-band amplifier, 10 MHz to 43.5 GHz <sup>1</sup>	A single amplifier covers applications including Test & instrumentation, Fiber Optics, 5G, SATCOM, etc.		
High Gain     Wideband     Low Noise Figure     Medium RF power	The Amplifier is capable of providing High Gain of about 33 dB typ. combined with low Noise Figure of 3.5 dB typ. The model is capable of delivering Saturated Output Power of over +11 dBm typ. in the entire operating band.		
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  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.		

1. Amplifier is usable down to 100 kHz

REV. B ECO-008181 ZVA-443HGX+ AD/JM/CP/AM 210610





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## **ELECTRICAL SPECIFICATIONS AT 25°C**

Parameter	Condition (MHz)	Min.	Тур.	Max.	Units
Frequency Range <sup>1</sup>		10		43500	MHz
	10 - 18000	30	37		dB
Caia	18000 - 32000	25	33		
Gain	32000 - 40000	24	30		
	40000 - 43500	22	28		
	10 - 18000		1.5		:1
L. L. L. V.C.A.P.	18000 - 32000		1.3		
Input VSWR	32000 - 40000		1.4		
	40000 - 43500		1.6		
	10 - 18000		1.5		:1
O L. LVCIMP?	18000 - 32000		1.7		
Output VSWR <sup>3</sup>	32000 - 40000		1.9		
	40000 - 43500		1.7		
	10 - 18000		12		dBm
O. da. da Danisa ad 1 dD annia ad 2	18000 - 32000		10		
Output Power at 1dB compression	32000 - 40000		9		
	40000 - 43500		8		
	10 - 18000		20		dBm
0.11102	18000 - 32000		18		
Output IP3	32000 - 40000		18		
	40000 - 43500		18		
Naisa Figura	1000-26500		3.5		dB
Noise Figure	26500-43500		6.0		
Operating DC Voltage		+9		+15	V
Device Operating Current at +9V <sup>2</sup>				350	mA
Device Operating Power at Operating DC Voltage			2.6		W

<sup>1.</sup> Amplifier is usable down to 100 kHz

## **MAXIMUM RATINGS**<sup>3</sup>

Parameter	Ratings		
Operating Temperature (Ambient)	-10°C to +85°C		
Storage Temperature -55°C to +100°C			
Total Power dissipation	3W		
Input Power (CW)	+5 dBm		
DC Voltage	+16V		

<sup>3.</sup> Permanent damage may occur if any of these limits are exceeded.

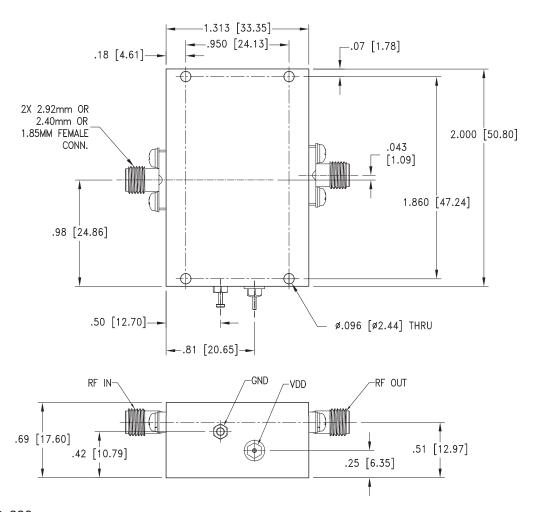
<sup>2.</sup> DC Supply must be able to source at least 400mA DC at startup.



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#### **OUTLINE DRAWING**



Weight: 220 grams

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