AETECHRON

7100 Series

High-speed AC/DC Amplifiers with Precision DC Supply

Performance Overview

7114

Recommended For: 13.5 to 48V DC testing with 250-kHz ripple or <4µs dropout requirements
AC Power at 20 kHz: 400 watts RMS
For High-Power Applications to: 150 kHz
DC Power: 15A at 13.5V DC
Voltage Potential: Up to 45V RMS

7136

Recommended For: DO-160 Section 16, AC with DC offset testing or other 115/120V RMS testing with up to 5.5A output requirements
AC Power at 20 kHz: 900 watts RMS
For High-Power Applications to: 50 kHz
DC Power: 5A from 13.5V DC to 48V DC
Voltage Potential: Up to 200V RMS

Features

- **Front-panel user controls for fixed or variable gain, current limit, DC offset, rail voltage, and AC or DC coupling**
- **Four-quadrant operation**
- **Compact 2U height**
- **Small signal response (8Vp-p) to 400 kHz**
- **User-adjustable precision DC offset**
- **User-adjustable current limit: 1A to 25A**
- **AE Techron Tough: Protection from over-temperature, over-current, over/under supply voltages; will drive capacitive and inductive loads**

AE Techron's **7100-Series** models are 4-quadrant, AC and DC amplifiers that provide exceptional versatility and value. Compact size, user configurability, DC-Max™ topology, and AE Techron toughness make the 7100-series amplifiers the ideal lab partners for conducted and radiated immunity testing, PSRR testing, or any application where more voltage or current is needed than is available from the signal source.

Compact Power

Lightweight and just 2U in height, 7100-series amplifiers make a great choice when size or portability are important selection criteria.

Versatile

Front-panel user controls give the 7100-series amplifiers a wide range of possible uses. Gain, maximum current, and DC offset can be fixed or infinetely varied. The choice of AC or DC coupling makes them suitable both for DC applications and for driving objects like coupling transformers or piezo elements that shouldn't see DC. All controls can be turned off when only a durable, high-current amplifier or DC source is needed. Or each function can be individually enabled to provide the unique set of capabilities needed at the moment.

7100-series amplifiers can produce a DC output without an input signal. DC output is independent of input signal and amplifier gain. This DC capability, when combined with an input signal from a function generator, creates a

DC Specifications

	OUTPUT (Amperes)			
	7114		7136	
VDC	5 Minutes, 100% Duty Cycle	1 Hour, 100% Duty Cycle	5 Minutes, 100% Duty Cycle	1 Hour, 100% Duty Cycle
48	12	8	7.5	6.0
24	10	9	7.0	5.4
13.5	20	15	6.0	5.0

versatile DC source with high-speed ripple and dropout capabilities.

DC-Max™

7100-series amplifiers are built with our new DC-Max topology. Amplifiers with DC-Max have long-term DC power that is more than 40% greater than traditional designs. This increased DC performance better matches the power requirements found in DC conducted immunity and PSRR testing.

AE Techron Toughness

The 7100-series amplifiers are designed using the same conservative design rules and protection systems that have made AE Techron amplifiers the toughest audio bandwidth amplifiers available.

7114 AC Specifications – High Voltage Mode

	PEAK OUTPUT						RMS OUTPUT				
	40 mSec Pulse, 20% Duty Cycle		5 Minutes, 100% Duty Cycle		1 Hour, 100% Duty Cycle		5 Minutes, 100% Duty Cycle		1 Hour, 100% Duty Cycle		
Ohms	Volts	Amps	Volts	Amps	Volts	Amps	Volts	Amps	Volts	Amps	Watts
Open	92.0	0.0	92.00	0.0	92.0	0.0	65.0	0.0	65.0	0.0	0
16	80.0	5.0	80.0	5.0	80.0	5.0	56.0	3.5	56.0	3.5	196
8	71.0	8.8	71.0	8.8	71.0	8.8	50.0	6.3	48.0	6.0	288
4	60	15.0	60.0	15.0	80.0	20.0	42.0	10.5	40.0	10.0	400
2	43.0	22.0	43.0	22.0	28.0	14.0	30.0	15.0	20.0	10.0	200

7114 AC Specifications – High Current Mode

	PEAK OUTPUT						RMS OUTPUT				
	40 mSec Pulse, 20% Duty Cycle		5 Minutes, 100% Duty Cycle		1 Hour, 100% Duty Cycle		5 Minutes, 100% Duty Cycle		1 Hour, 100% Duty Cycle		
Ohms	Volts	Amps	Volts	Amps	Volts	Amps	Volts	Amps	Volts	Amps	Watts
Open	42.4	0.0	42.4	0.0	42.2	0.0	30.0	0.0	30.0	0.0	0
4	32.0	8.0	32.0	8.0	32.0	8.0	22.0	5.5	22.0	5.5	121
2	28.0	14.0	28.0	14.0	28.0	14.0	20.0	10.0	20.0	10.0	200
1	20.0	20.0	20.0	20.0	20.0	20.0	14.0	14.0	14.0	14.0	196
0.5	12.5	25.0	12.5	25.0	12.5	25.0	8.9	17.8	8.9	17.8	158

AC Specifications – High-Voltage Mode

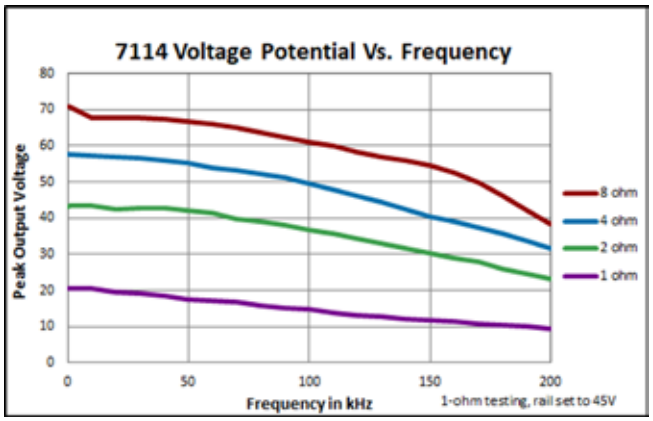
	PEAK OUTPUT						RMS OUTPUT				
	40 mSec Pulse, 20% Duty Cycle		5 Minutes, 100% Duty Cycle		1 Hour, 100% Duty Cycle		5 Minutes, 100% Duty Cycle		1 Hour, 100% Duty Cycle		
Ohms	Volts	Amps	Volts	Amps	Volts	Amps	Volts	Amps	Volts	Amps	Watts
Open	300.0	0.0	300.0	0.0	300.0	0.0	211.0	0.0	211.0	0.0	0
32	288.0	9.0	258.8	8.1	258.0	8.1	183.0	5.7	170.0	5.3	903
24	263.0	11.0	206.0	12.9	186.4	7.8	167.0	6.9	131.8	5.5	729
16	231.0	14.4	202.0	12.6	87.8	5.5	143.0	9.1	62.1	3.9	241

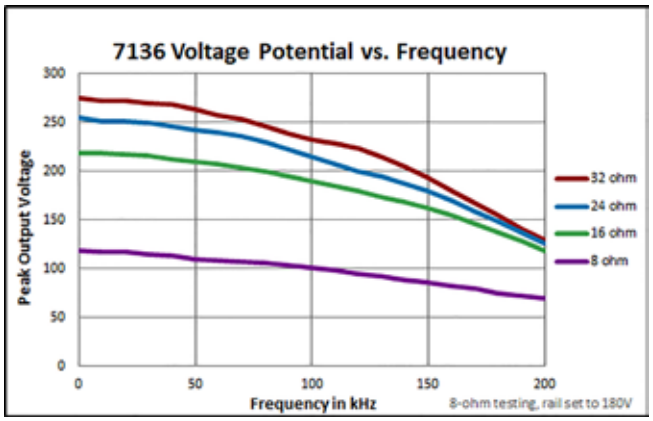
AC Specifications – High-Current Mode

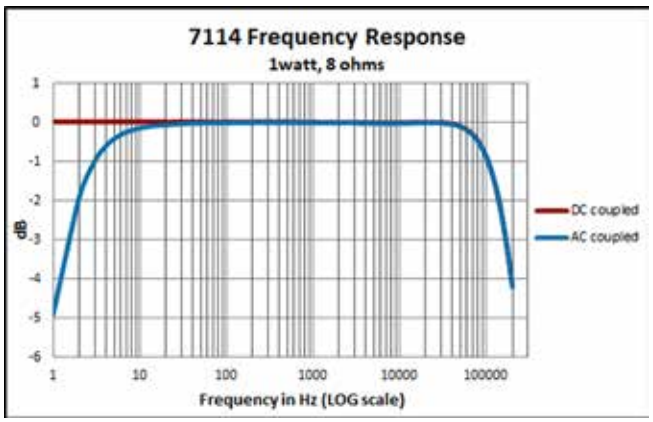
	PEAK OUTPUT						RMS OUTPUT				
	40 mSec Pulse, 20% Duty Cycle		5 Minutes, 100% Duty Cycle		1 Hour, 100% Duty Cycle		5 Minutes, 100% Duty Cycle		1 Hour, 100% Duty Cycle		
Ohms	Volts	Amps	Volts	Amps	Volts	Amps	Volts	Amps	Volts	Amps	Watts
Open	184.0	0.0	184.0	0.0	184.0	0.0	127.0	0.0	127.0	0.0	0
16	142.0	8.9	134.8	8.4	134.8	8.4	95.3	6.0	95.3	6.0	568
8	125.0	24.3	117.0	14.6	117.0	14.6	83.0	10.4	83.0	10.4	861
4	100.0	25.0	89.6	22.4	42.0	10.5	63.3	15.8	29.7	7.4	221

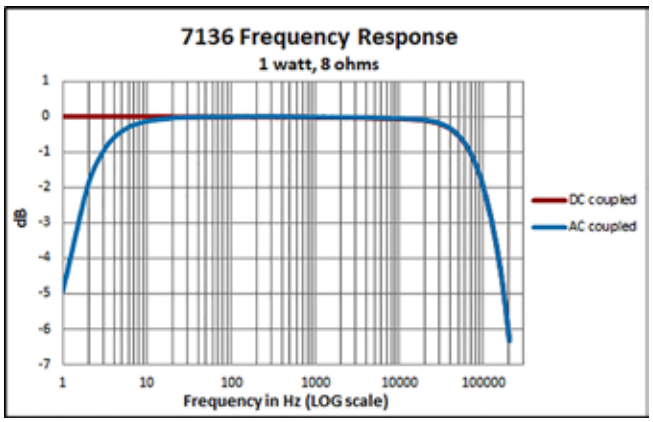
Features	7114	7136
Maximum Output	400 VA	900 VA
DC Offset	±20V or ±45V	±2V or ±20V
Current Limit	1A to 25A	1A to 25A
Gain	0 to 10	0 to 40
Coupling	AC (DC blocked) or DC	AC (DC blocked) or DC
Mode of Operation	Controlled Voltage or Controlled Current	Controlled Voltage or Controlled Current
Rear Control Port	Signal In, Fault Status, Enable/Disable, Current Monitor	Signal In, Fault Status, Enable/Disable, Current Monitor

PERFORMANCE









CE 220-240V versions of this product bear the CE mark

AE Techron Sales Representative