



## 7220 Series

### 1-kVA, DC-enabled Linear Power Amplifiers

#### Performance Overview:

- Up to 1000 watts RMS power output
- Small signal response up to 1 MHz
- Up to 16A at 13.5 VDC
- Can be used to create series or parallel systems for up to 3 times the voltage or 4 times the current output.

#### 7224

AC Power at 20 kHz: 900 watts RMS  
 For High-Power Applications to: 40 kHz  
 Small Signal: 20V<sub>p-p</sub> to 300 kHz  
 DC Power: 16A at 13.5 VDC

#### 7226

AC Power at 20 kHz: 900 watts RMS  
 For High-Power Applications to: 100 kHz  
 Small Signal: 20V<sub>p-p</sub> to 300 kHz  
 DC Power: 16A at 13.5 VDC

#### 7228

AC Power at 20 kHz: 1000 watts RMS  
 For High-Power Applications to: >100 kHz  
 Small Signal: 8V<sub>p-p</sub> to 1 MHz  
 DC Power: 16A at 13.5 VDC

#### Features

- Field-selectable controlled-voltage or controlled-current operation.
- Can be switched between rail supply modes and voltages to optimize for various load impedances.
- Protection circuits guard against over/under voltage, over current, over temperature, and circulating ground currents.
- DC blocking, DC Servo and user-variable current limit functions (7228 model only).

AE Techron's **7220-Series** amplifiers, when used with a signal generator such as the AE Techron 3110, can simultaneously produce both the DC voltage needed to drive the DUT and the high-frequency (AC ripple) conducted interference waveform required in cranking tests found in Standards like FMC1278. They can also be used to perform surge and dropout tests found in many automotive Standards, like GMW3172-07, ISO 7637-2, and SAE J1113/2.

When used with AE Techron's T-Series coupling transformers (T1000, T2000 and T3700), 7220-Series amplifiers are ideal for use in the low-voltage conducted or radiated immunity tests needed for Aviation industry Standards like DO 160 (Section 18 and 19), MIL STD 461/462 (CS101 and RS101), Airbus and Boeing audio bandwidth electrical and magnetic tests.

The 7220-Series amps are a perfect choice to drive small to medium Helmholtz coils and radiators like those specified in FMC1278 (RI140, RI150).

#### DC Specifications – High-Current Mode

VDC	OUTPUT (Amperes)	
	1 Hour, 100% Duty Cycle	
	7224 and 7226	7228
48	12	16
24	20	25
13.5	16	16

## Comparison

Features	7224	7226	7228
Switch between rail supply mode and voltages to optimize for various load impedances	Requires opening of case	Requires opening of case	Back-panel switch
Change from controlled-voltage to controlled-current operation	Requires opening of case	Requires opening of case	Back-panel switch
Parallel operation	Optional	Optional	Back-panel switch
Series operation	Optional	Optional	Back-panel switch
Ground-lift / circulating current protection	External resistor/fuse	External resistor/fuse	Resettable protection circuit
DC Block enable/disable	N/A	N/A	Back-panel switch
User-variable current limit	N/A	N/A	Back-panel switch
DC Servo enable/disable	N/A	N/A	Back-panel switch

## Use for testing to these Specifications:

### MILITARY

MIL STD 461  
RTCA / DO 160

### AVIATION

AIRBUS ABD0100  
Boeing D6-16050-5  
ISO 1540:2006  
MIL STD 704

### PRODUCT STANDARDS

EN 300329  
EN 300340  
EN 300342-1  
EN 301489-1, -7, -17, -24

### AUTOMOTIVE STANDARDS

ISO 7637  
ISO 11452-8 and -10  
ISO 16750-2  
JASO D001-94  
SAE J1113-2, -11, -12  
SAE J1455

### AUTOMOTIVE OEM

BMW 600 13.0 (Part 2)  
BMW GS 95004

### AUTOMOTIVE OEM (cont.)

BMW GS 95024-2-1  
Chrysler CS-11809 (2009)  
Chrysler CS-11979  
Chrysler DC-11224 Rev.A  
DaimlerChrysler DC-10614  
DaimlerChrysler DC-10615  
DaimlerChrysler DC-11224  
DaimlerChrysler PF-10540  
EMC-CS-2010JLR V1.1 (2011-01)  
Fiat 9.90110  
Ford FMC 1278, RI 140  
and 150  
Ford FMC 1278, CI 210,  
230, 250 and 260  
Ford ES-XW7T-1A278-AC  
Ford WDR 00.00EA  
Freightliner 49-00085  
GLloyd VI-7-2  
GM 9105P  
GMW 3097  
GMW 3100  
GMW 3172

### AUTOMOTIVE OEM (cont.)

Honda 3982z-SDA-0030  
Hyundai ES 39110-00  
Hyundai ES 96100-02  
IVECO 16-2103  
Kia/Hyundai ES 95400-10  
Mack Trucks 606GS15  
MAN 3285  
Mazda MES PW 67600  
MBN 10284-2  
Mercedes MBN 10284-2  
Mercedes AV EMV  
Mercedes-Benz A 211 000 42 99  
Mercedes MBN 22100-2  
Mitsubishi ES-X82010  
MW 3097  
Nissan 28400 NDS 02, 03, 05, 07  
Nissan 28401 NDS 02  
Piaggio 7431  
Porsche  
PSA B21 7090 & 7110  
PSA B21 7110  
Renault 36.00.400/B & C

### AUTOMOTIVE OEM (cont.)

Renault 36.00.808/--D, E.F, G,  
H, J, K, and L  
SA B21 7110  
Scania TB1400  
Scania TB1700  
Smart DE1005B  
Tata TST/TS/WI/257  
Toyota TSC3500G  
Toyota TSC3590G  
Toyota TSC6203G  
Toyota TSC7001G  
Toyota TSC7034G  
UN ECE R10 (Automotive)  
Volvo STD 515-0003  
Volvo EMC Requirements  
VW TL 801 01  
VW TL 820 66  
VW TL 821 66  
VW TL 823 66  
VW TL 824 66  
VW TL 825 66

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