

5414AMP / 5434AMP / 5454AMP

GLOBALCOM[®] 5400 Power Amplifiers



General Description

The 5400 series of amplifiers are an integral part of the IED GLOBALCOM 5400 Series Communications System. The amplifiers feature four channels of 100, 300 or 500 watt amplification.

The amplifier is Class D switching mode which provides benefits such as: higher efficiency, increased reliability, improved performance, and lower operating cost.

Switching mode operation combined with high voltage power devices make it possible to eliminate the heavy, costly, bulky transformers used by some amplifiers to drive 70.7V distributed speaker lines.

The amplifiers are internally monitored and limited to prevent over-current and over-temperature conditions, also protecting the amplifiers from harm due to short circuits on the speaker lines.

The 70.7V floating direct outputs reduce more than just the weight: Installation and rack prices will drop significantly. The cost for energy consumption will average at roughly one third of any ordinary amplifier.

In addition to mains power, a 24VDC power input is provided in the event of power loss which will automatically switch to 24V battery power - without any loss of output power. The amplifiers are typically paired with a 5404DZM or 5432DZM for EN54-16 compliant systems.

The mainframe requires two (2) rack units (3.5") of vertical space in a 19" equipment rack / cabinet. All cooling is front to back.

Features

- Class D
- Discrete build of power amp modules
- 70.7 Volts direct output (without a transformer)
- 24 VDC backup power
- High power, high efficiency Switched-Mode Power
- Supply (SMPS) with Power Factor Correction (PFC)
- Protection circuits: DC, LF, HF, Thermal, Short Circuit,
- Current Limiter
- External remote power on/off control
- Temperature controlled, variable speed, low noise fans
- High Tech Surface Mounting Technology (SMT) Design
- Four 100, 300, or 500 Watt amplifier output channels

Front Panel Features

- DC Power Indicator (green)
- AC Power Indicator (green)
- For each amplifier channel:
 - Clip Indicator (red)
 - Signal Indicator (green)
 - Protection Indicator (red)
 - Amplifier Power Indicator (green)

Available Models

Model	Channels	Output Power (per channel)	Output Type	Gain
5414	4	100 W	70.7 V	39.2 dB
5434	4	300 W	70.7 V	39.2 dB
5454	4	500 W	70.7 V	39.2 dB

Specifications

Electrical, Analog

All Measurements at 240VAC unless noted otherwise

Power Requirements	50-60 Hz
Power Output (per channel)	
5414-US	100 W (70.7 V)
5434-US	300 W (70.7 V)
5454-US	500 W (70.7 V)
Efficiency at full power	> 55%
Frequency Response at full power	± -0.3 dB 20 Hz - 20 kHz
Power Bandwidth	20 Hz – 20 kHz, +/- 0.3 dB
Signal-to-Noise Ratio	> 100 dB 20 Hz – 20 kHz ref
Total Harmonic Distortion, THD	< 0.3%
Output Clipping Level	70.7 V RMS
Input Level for full power	0 dBu
Input Clipping	21 dBu
Input Impedance	12 kΩ

Mechanical

Height	2 rack units, 3.47" (8.81 cm)
Width (without rack mount ears)	17.2" (43.7 cm)
Depth	17.87" (454 mm)
Weight	30.86 lbs (14 kg)

Connectors

Mains Power	Power switch, 120 V cord, fuse
24 VDC Backup Supply	2-pin, Phoenix, 10.16 mm
Audio Inputs (4)	10-pin Phoenix, 3.81 mm spacing
Speaker Outputs (2 pair)	5-pin Phoenix, 5.08 mm spacing
Amp Alive Contacts (2)	Part of 10-pin Phoenix, 3.81 mm spacing
AC OK (1)	Part of 10-pin Phoenix, 3.81 mm spacing
DC OK (1)	Part of 10-pin Phoenix, 3.81 mm spacing
Remote Switch (1)	Part of 10-pin Phoenix, 3.81 mm spacing

Environmental

Operating Temperature Range	+32°F – +122°F (+0°C – +50°C)
Applicable for typical voice paging and background music applications	
Storage Temperature Range	–40°F – +158°F (–40°C – +70°C)
Mains Power	105-120 VAC 50-60 Hz
Backup Power	24 VDC

Heat

Heat Dissipation (Idle)	
5414	75 W
5434	75 W
5454	75 W
Heat Dissipation 1/8 Load (Speech)	
5414	80 W
5434	140 W
5454	200 W
Heat Dissipation 1/3 Load (compressed Music)	
5414	90 W
5434	200 W
5454	330 W
Heat Dissipation Full Power	
5414	120 W
5434	340 W
5454	550 W