1500.4 Amplifier Datasheet

Total continuous sine output power > 2000 Watts RMS

Input Signal Reproduction Accuracy > 99.973%

Meets or Exceeds Japanese Hi-Res Audio Standards

Industry Standardized Power Ratings	> 325 Watts Continuous X 4 into 4Ω
14.4 VDC, 1kHz Sine, < 1% THD	> 500 Watts Continuous X 4 into 2Ω
All channels driven	> 1000 Watts Continuous X 2 into 4Ω BTL
D'Amore Engineering Power Ratings	> 250 Watts Continuous X 4 into 4Ω
12.6 VDC, 1kHz Sine, <0.05% THD	> 375 Watts Continuous X 4 into 2Ω
All channels driven	> 750 Watts Continuous X 2 into 4Ω BTL
Music Power Ratings	> 400 Watts X 4 into 4Ω
IHF-202 Dynamic Standard	> 750 Watts X 4 into 2Ω
14.4 VDC 1kHz < 1% THD	> 1500 Watts X 2 into 4Ω BTL

Quality of Signal Reproduction / Other Electrical Measurements

All measurements at 12.6 V, 4 ohms, 1 kHz sine, ½ power unless specified otherwise

Frequency Response Flatness from 10 – 40,000 Hz	+/- 0.3 dB
Frequency Response +0, - 1dB	7 – 80,000 Hz
Frequency Response +0, -3dB	3 – > 100,000 Hz
Signal to Noise ratio at full rated power	> 109 dB A weighted
Damping Factor, 20Hz	> 700
Total Harmonic Distortion	< 0.027%
Channel Separation (1/2), (3/4), (1/3), (2/4)	< 80 dB, 80 dB, 100 dB, 100 dB
Max idle current	3 Amperes X 2
Max current (sine wave) 4Ω, 2Ω rated power	70 Amperes X 2, 120 Amperes X 2
Efficiency at industry standard power rating, 4Ω	65%
Efficiency at hard clipping, 4Ω	> 75%
Operating DC Voltage range	10.0 V – 15.8 V
Input Sensitivity, balanced/unbalanced	400 mV – 8 V / 200 mV – 4 V
Input Impedance	10 kΩ
Slew rate	> 30 V/μS

Technologies

Mirror Image circuit board design – Identical performance from every output channel

Dual Stereo-block design – One power supply for every 2 output channels

Low EMI radiation design – for use in high end automobiles with sensitive onboard electronics

Class A/B – emitter follower design with Class A voltage amplifier, Class A/B current amplifier

Calibrated LED Meters – monitor the output signal vs the high voltage power supply for accurate feedback of how close to clipping the output signal is at any load impedance. Also used for indication of Over-voltage, Under-voltage, Over-current, and Over-temperature protection system activations

TI / Burr Brown Balanced Input - For lowest noise and hiss

Internal, independent balanced / unbalanced input switches for each channel

Dual differential Voltage Amplifier Stage - For lowest distortion and very high slew rate

Bi-Polar junction output transistors - For best sound quality and dependability

N-Channel MOSFET Switching Power Supply - For best efficiency and high power density

Nichicon Fine Gold and MUSE Audio grade capacitors in critical locations

Aluminum Oxide Ceramic heatsink isolators for maximum heat transfer into heatsinks

Non-inductive feedback loop for high performance at high frequencies

4-layer heavy copper main PCBs and voltage amplifier PCBs

Voltage amplifiers mounted perpendicular to current amplifiers on their own 4-layer circuit boards to minimize noise

Protection systems

Real time analog output device monitor - 2 slope limiting system for overload protection (lower than recommended impedance or short circuit conditions)

Atmel microprocessor control and monitoring of critical systems via high speed 10-bit Analog to Digital converters

- Battery voltage - For under-voltage and over-voltage conditions
- Remote Turn on request
- 4 precision temperature sensors, each heatsink individually monitored
- Output current, output voltage
- Power supply high voltage section
- Power supply PWM controller
- LED Display Meters
- Cooling Fan PWM speed control

Connectors

Dual 0 AWG SWWS power and ground, one per stereo-block

8 – 18 AWG SWWS speaker connectors

Dual 12 – 20 AWG SWWS remote turn-on connectors, one per stereo-block

Recommended Fusing

150 A fuse recommended per Stereo-block, not included, external

Mechanical

Base plate machined from 190 mil thick (4.8mm) 6061 aluminum, clear anodized

Heatsinks, 4 pieces CNC machined 6061 aluminum blocks, not cast, clear anodized

Top Cover, steel sheet metal, powder coated

Dimensions, inches / millimeters	23.25 x 11.0 x 2.25 / 590 x 280 x 57
Weight, Lbs / kg	27.8 / 12.6