

SPECIFICATIONS

| Model                                                                                                                   | DA-250F                                                                                                                  |                                                                                 | DA-250FH                              | DA-250D                                                                                                                  | DA-250DH                              | DA-550F                                                                                                                  | DA-500FH                              |
|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| Power Requirement                                                                                                       | 220 – 240V AC, 50/60Hz                                                                                                   |                                                                                 |                                       |                                                                                                                          |                                       |                                                                                                                          |                                       |
| Number of Channels                                                                                                      | 4                                                                                                                        |                                                                                 |                                       | 2                                                                                                                        |                                       | 4                                                                                                                        |                                       |
| Total Output All Channel Driven                                                                                         | 1000W (1kHz, 4Ω)<br>680W (1kHz, 8Ω)                                                                                      |                                                                                 | 1000W (1kHz, 40Ω: 100V line)          | 500W (1kHz, 4Ω)<br>340W (1kHz, 8Ω)                                                                                       | 500W (1kHz, 40Ω: 100V line)           | 2200W (1kHz, 4Ω)<br>1400W (1kHz, 8Ω)                                                                                     | 2000W (1kHz, 20Ω: 100V line)          |
| Output Voltage per Channel                                                                                              | 31.6V (1kHz, 4Ω)<br>36.9V (1kHz, 8Ω)                                                                                     |                                                                                 | 100V (1kHz, 40Ω: 100V line)           | 31.6V (1kHz, 4Ω)<br>36.9V (1kHz, 8Ω)                                                                                     | 100V (1kHz, 40Ω: 100V line)           | 46.9V (1kHz, 4Ω)<br>52.9V (1kHz, 8Ω)                                                                                     | 100V (1kHz, 20Ω: 100V line)           |
| Output Current per Channel                                                                                              | 7.9A (1kHz, 4Ω)<br>4.6A (1kHz, 8Ω)                                                                                       |                                                                                 | 2.5A (1kHz, 40Ω: 100V line)           | 7.9A (1kHz, 4Ω)<br>4.6A (1kHz, 8Ω)                                                                                       | 2.5A (1kHz, 40Ω: 100V line)           | 11.7A (1kHz, 4Ω)<br>6.6A (1kHz, 8Ω)                                                                                      | 5A (1kHz, 20Ω: 100V line)             |
| Power Output<br>8 ohms per channel<br>4 ohms per channel<br>16 ohms bridged<br>8 ohms bridged<br>Hi-Z: 100V per channel | 170W<br>250W<br>340W<br>500W<br>—                                                                                        |                                                                                 | —<br>—<br>—<br>—<br>250W              | 170W<br>250W<br>340W<br>500W<br>—                                                                                        | —<br>—<br>—<br>—<br>250W              | 350W<br>550W<br>700W<br>1100W<br>—                                                                                       | —<br>—<br>—<br>—<br>500W              |
| Power Consumption*                                                                                                      |                                                                                                                          |                                                                                 |                                       |                                                                                                                          |                                       |                                                                                                                          |                                       |
| Idle power consumption                                                                                                  | 48W, 0.3A                                                                                                                |                                                                                 | 75W, 0.5A                             | 27W, 0.3A                                                                                                                | 46W, 0.5A                             | 57W, 0.4A                                                                                                                | 65W, 0.5A                             |
| Rated power consumption                                                                                                 |                                                                                                                          |                                                                                 |                                       |                                                                                                                          |                                       |                                                                                                                          |                                       |
| 8 ohms 1kHz                                                                                                             | 800W, 5.8A                                                                                                               |                                                                                 | —                                     | 400W, 2.8A                                                                                                               | —                                     | 1550W, 11.3A                                                                                                             | —                                     |
| 4 ohms                                                                                                                  | 1200W, 8.7A                                                                                                              |                                                                                 | —                                     | 620W, 4.2A                                                                                                               | —                                     | 2750W, 19.9A                                                                                                             | —                                     |
| 100 Volts                                                                                                               | —                                                                                                                        |                                                                                 | 1150W, 8.3A                           | —                                                                                                                        | 580W, 3.9A                            | —                                                                                                                        | 2300W, 16.8A                          |
| 1/8 Power 8 ohms Pink noise                                                                                             | 167W, 1.2A                                                                                                               |                                                                                 | —                                     | 95W, 0.8A                                                                                                                | —                                     | 325W, 2.2A                                                                                                               | —                                     |
| 4 ohms                                                                                                                  | 248W, 1.6A                                                                                                               |                                                                                 | —                                     | 126W, 0.9A                                                                                                               | —                                     | 442W, 2.7A                                                                                                               | —                                     |
| 100 Volts                                                                                                               | —                                                                                                                        |                                                                                 | 270W, 1.9A                            | —                                                                                                                        | 143W, 1.1A                            | —                                                                                                                        | 493W, 3.1A                            |
| 1/3 Power 8 ohms                                                                                                        | 349W, 2.4A                                                                                                               |                                                                                 | —                                     | 184W, 1.3A                                                                                                               | —                                     | 733W, 5.1A                                                                                                               | —                                     |
| 4 ohms                                                                                                                  | 511W, 3.7A                                                                                                               |                                                                                 | —                                     | 267W, 1.9A                                                                                                               | —                                     | 1119W, 8.0A                                                                                                              | —                                     |
| 100 Volts                                                                                                               | —                                                                                                                        |                                                                                 | 491W, 3.5A                            | —                                                                                                                        | 278W, 2.0A                            | —                                                                                                                        | 1026W, 7.4A                           |
| 1/8 Power 8 ohms 1kHz                                                                                                   | 143W, 1.0A                                                                                                               |                                                                                 | —                                     | 79W, 0.7A                                                                                                                | —                                     | 273W, 1.8A                                                                                                               | —                                     |
| 4 ohms                                                                                                                  | 202W, 1.4A                                                                                                               |                                                                                 | —                                     | 110W, 0.9A                                                                                                               | —                                     | 411W, 2.7A                                                                                                               | —                                     |
| 100 Volts                                                                                                               | —                                                                                                                        |                                                                                 | 230W, 1.6A                            | —                                                                                                                        | 128W, 1.0A                            | —                                                                                                                        | 399W, 2.6A                            |
| 1/3 Power 8 ohms                                                                                                        | 284W, 1.9A                                                                                                               |                                                                                 | —                                     | 150W, 1.1A                                                                                                               | —                                     | 632W, 4.4A                                                                                                               | —                                     |
| 4 ohms                                                                                                                  | 437W, 3.0A                                                                                                               |                                                                                 | —                                     | 215W, 1.5A                                                                                                               | —                                     | 958W, 6.9A                                                                                                               | —                                     |
| 100 Volts                                                                                                               | —                                                                                                                        |                                                                                 | 443W, 3.0A                            | —                                                                                                                        | 237.7W, 1.7A                          | —                                                                                                                        | 860W, 6.1A                            |
| Frequency Response                                                                                                      | 20Hz – 20kHz (±1dB)                                                                                                      |                                                                                 | 50Hz – 20kHz (-3dB, +1dB)             | 20Hz – 20kHz (±1dB)                                                                                                      | 50Hz – 20kHz (-3dB, +1dB)             | 20Hz – 20kHz (-2dB, +1dB)                                                                                                | 50Hz - 20kHz (-3dB, +1dB)             |
| THD                                                                                                                     | 0.1 % (1kHz)<br>0.3 % (20Hz – 20kHz)                                                                                     |                                                                                 | 0.1 % (1kHz)<br>0.3 % (100Hz – 20kHz) | 0.1 % (1kHz)<br>0.3 % (20Hz – 20kHz)                                                                                     | 0.1 % (1kHz)<br>0.3 % (100Hz – 20kHz) | 0.1 % (1kHz)<br>0.15 % (20Hz – 20kHz)                                                                                    | 0.1 % (1kHz)<br>0.3 % (100Hz – 20kHz) |
| S/N Ratio (A weighted)                                                                                                  | 100dB                                                                                                                    |                                                                                 |                                       |                                                                                                                          |                                       |                                                                                                                          |                                       |
| Crosstalk at 10kHz (A weighted)                                                                                         | 70dB                                                                                                                     |                                                                                 |                                       |                                                                                                                          |                                       |                                                                                                                          |                                       |
| DC Offset*                                                                                                              | ±5mV                                                                                                                     |                                                                                 |                                       |                                                                                                                          |                                       |                                                                                                                          |                                       |
| Voltage Gain*                                                                                                           | 29.5dB                                                                                                                   |                                                                                 | 38.2dB                                | 29.5dB                                                                                                                   | 38.2dB                                | 32.6dB                                                                                                                   | 38.2dB                                |
| Damping Factor*                                                                                                         | 100 (1kHz, 8Ω)                                                                                                           |                                                                                 | 300 (1kHz, 40Ω: 100V line)            | 100 (1kHz, 8Ω)                                                                                                           | 300 (1kHz, 40Ω: 100V line)            | 95 (1kHz, 8Ω)                                                                                                            | 240 (1kHz, 20Ω: 100V line)            |
| nputs                                                                                                                   | Input impedance                                                                                                          | 10kΩ (unbalanced), 20kΩ (balanced)                                              |                                       |                                                                                                                          |                                       | 10kΩ (unbalanced), 20kΩ (balanced)                                                                                       |                                       |
|                                                                                                                         | Input sensitivity                                                                                                        | +4dB (1.23V)                                                                    |                                       |                                                                                                                          |                                       | +4dB (1.23V)                                                                                                             |                                       |
|                                                                                                                         | Input clipping                                                                                                           | 14V (25.1dBu)                                                                   |                                       |                                                                                                                          |                                       | 12V (23.8dBu)                                                                                                            |                                       |
| Protection Circuit                                                                                                      |                                                                                                                          |                                                                                 |                                       |                                                                                                                          |                                       |                                                                                                                          |                                       |
|                                                                                                                         | Amplifier section                                                                                                        | DC output, overheat protection, load shorting, overload current, maximum output |                                       |                                                                                                                          |                                       |                                                                                                                          |                                       |
|                                                                                                                         | Power supply section                                                                                                     | Overheat protection, AC rush current                                            |                                       |                                                                                                                          |                                       |                                                                                                                          |                                       |
| Cooling                                                                                                                 | Continuously constant speed fan with front-to-rear airflow,<br>50,000 hours life time at 25°C                            |                                                                                 |                                       |                                                                                                                          |                                       | Continuously constant speed fan with front-to-rear airflow<br>100,000 hours life time at 25°C                            |                                       |
| Operating Temperature                                                                                                   | -10°C to +40°C                                                                                                           |                                                                                 |                                       |                                                                                                                          |                                       |                                                                                                                          |                                       |
| Operating Humidity                                                                                                      | Under 90% RH (no condensation)                                                                                           |                                                                                 |                                       |                                                                                                                          |                                       |                                                                                                                          |                                       |
| Dimensions                                                                                                              | 482 (W) × 44 (H) × 401.8 (D)mm                                                                                           |                                                                                 |                                       |                                                                                                                          |                                       | 482 (W) × 88.4 (H) × 404.2 (D)mm                                                                                         |                                       |
| Weight                                                                                                                  | 6.8kg                                                                                                                    |                                                                                 |                                       | 5.3kg                                                                                                                    |                                       | 9kg                                                                                                                      |                                       |
| Finish                                                                                                                  | Panel: Aluminum, alumite process, black/Case: Plated steel sheet                                                         |                                                                                 |                                       |                                                                                                                          |                                       |                                                                                                                          |                                       |
| Accessories                                                                                                             | Power cord(2m) × 1,<br>Euro style terminal block connector (3-pin) × 4,<br>Tamper-proof cap × 4, Rack mounting screw × 4 |                                                                                 |                                       | Power cord(2m) × 1,<br>Euro style terminal block connector (3-pin) × 2,<br>Tamper-proof cap × 2, Rack mounting screw × 2 |                                       | Power cord(2m) × 1,<br>Euro style terminal block connector (3-pin) × 4,<br>Tamper-proof cap × 4, Rack mounting screw × 4 |                                       |
| Option                                                                                                                  | —                                                                                                                        | Matching transformer: MT-251H                                                   |                                       | —                                                                                                                        | Matching transformer: MT-251H         | —                                                                                                                        | Matching tranformer: MT-251H          |

0dB=0.775Vrms  
Typical data

MT-251H  
Matching Transformer  
Impedance: 100V Line: 40Ω (250W)  
Frequency Response: 30Hz ~ 18kHz



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DA-250D/250DH  
DA-250F/250FH  
DA-550F/500FH  
Multi-Channel  
Digital Power Amplifier



Top-of-the-line operation and  
performance efficiency



# A Digital Amplifier technology redefines the very concept of amplifiers.

The power supply unit is the heart of the amplifier.  
To ensure consistently high performance and reliable operation,  
TOA engineers have given the DA Series  
a system that provides power independently to  
each of the four channels.  
This testifies to TOA's attitude to product development,  
which is always totally motivated by the desire to provide  
high-quality products that offer worry-free use.  
Never compromise —  
that's the TOA philosophy.

# Design optimization for efficient and reliable high-level performance

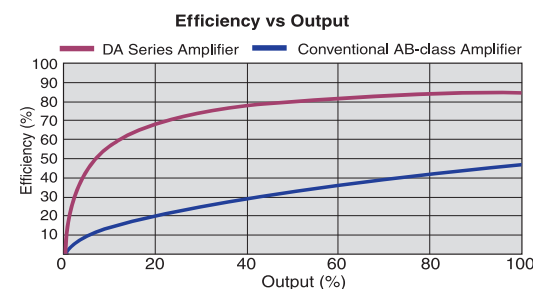
The TOA DA-250F/FH, DA-250D/DH and DA-550F/500FH multi-channel power amplifiers offer a wider choice of power ratings, advanced Class D amplification circuitry, and a highly efficient AC mains to output power ratio, for the complete technological superiority it takes to support long-term installation applications. These energy-efficient, space-saving amplifiers are designed to combine high levels of performance and efficiency, and are well-suited to ensure sound reinforcement reliability in a wide range of venue types. The "F" and "D" models are ideal for multi-zone applications such as presentation and press-conference rooms, restaurants and similar-sized locations. The "FH" and "DH" units are well-suited to such locations as exhibition halls, sports facilities, multipurpose halls and houses of worship.



## FEATURES

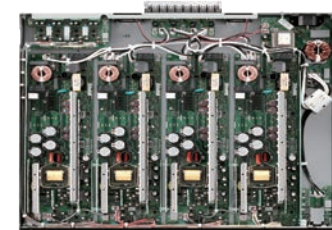
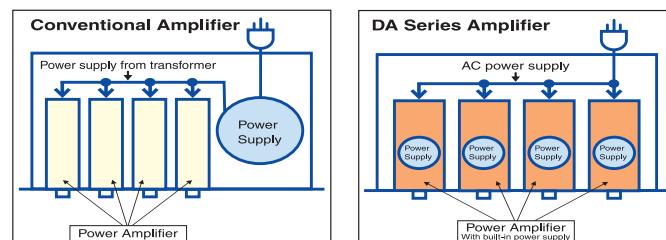
### High efficiency

Extremely high amplification efficiency of 80-90%, resulting in reduction in power consumption by more than 60% compared with Class-AB amplifiers.



### Independent power supply

Each of the channels has its own power supply. If the power supply of Channel 1 should fail, this won't affect the operation of Channels 2-4. It is also possible to use one of the channels as a spare amplifier.



Inside of DA-250F/FH model

### Highly durable

Stands up to extended hours of operation. The DA amplifier has undergone a large number of rigorous tests to prove its durability. In addition, TOA has been conducting a "non-stop driving test" of the DA Series.

### High reliability

The DA amplifier has a comprehensive protection circuitry for protection against excessive current flow due to overload, short circuit, unusual DC voltage output, power amplifier heat sink temperature rise (DA-250D/DH, DA-550F/500FH: over 100°C, DA-250F/FH: over 110°C), power supply temperature rise (DA-550F/500FH: over 80°C), and temperature rise inside the unit (DA-250D/DH, DA-250F/FH: over 80°C).

### Amplifier with world-class lightweight design\*

Installation has become much easier thanks to the lightweight design.

\*TOA comparative data (weight/watt)

### Compact design

The DA-250 Series is 1-unit size and the DA-500 Series is 2-unit size, and they can be efficiently mounted on a rack, so they require only a small installation space. Because the amplifiers do not generate much heat, 5 units can be stacked together in a rack.

