TOA

DA-250F / DA-250FH

Power Amplifiers

Compact dimensions and high power for
any installed sound application.

safe&sound

TOA

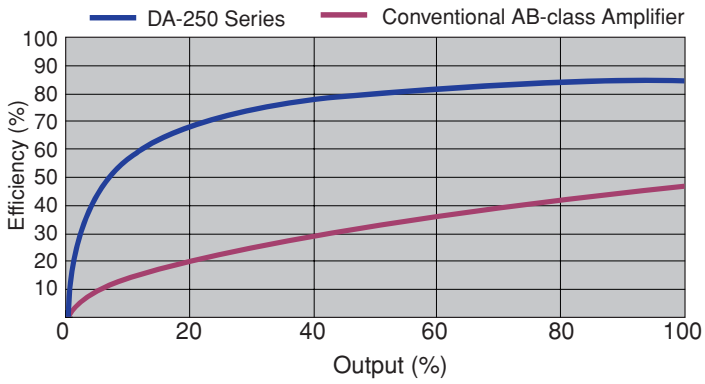
Innovative circuit design and superb pe

Introducing TOA's DA-250F and DA-250FH power amplifiers. Featuring multiple high power outputs, advanced digital technology and compact, lightweight design, these versatile amplifiers are perfect solutions for virtually any installed sound application.

High-efficiency amplifier topology.

TOA's proprietary amplifier topology achieves approximately 85% efficiency in AC mains to output power conversion. The high-efficiency, compact design operates at much lower temperature levels eliminating the need for large heat sinks.

Efficiency vs Output



Amplifier design optimized for installed sound applications

The DA-250F and 250FH are specifically designed to produce high power with high efficiency. Along with switching mode power supplies, the amplifiers also offer the high power advantages of Pulse Width Modulation (PWM) which requires much smaller power supply voltage than conventional amplifier designs.

Two configurations suit different applications.

Along with the low impedance DA-250F, a high-impedance version, the DA-250FH, is available for 70/100 volt application.

Easily accommodates high power requirements.

Both amplifiers can be conveniently bridged* (Channels 1/2 and 3/4 bridgeable), increasing the output from 250W into 4 channels up to 500W into 2 channels.

*without DA-250FH 220 – 240V AC version.

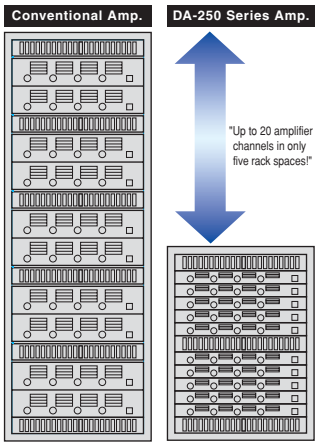
Versatile enough for any venue.

Both amplifiers are well-suited for a wide variety of installed sound requirements. The DA-250FH is ideal for venues ranging from exhibition halls, sports facilities and gymnasiums to houses of worship and meeting halls and many other locations. The DA-250FH proves ideal for sound reinforcement in multi-zone multi-zone applications such as presentation and press conference rooms as well as restaurants and similarly sized locations.

Compact dimensions facilitate installation

The powerful yet compact DA-250F and DA-250FH amplifiers occupy only one standard rack space and weight only 6.6kg (14.6 lbs)* allowing flexible installation options. For complex installed sound applications, amplifiers can be stacked together, requiring only one perforated airflow panel between every 5 units. The amplifiers are also equipped with dual low-noise constant speed fans to ensure adequate cooling in demanding environments and extend operational reliability and service life.

*220 – 240V AC version: 6.8kg (15.0 lbs)



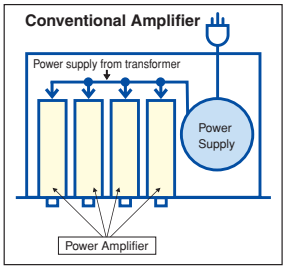
rformance that satisfy any requirement.

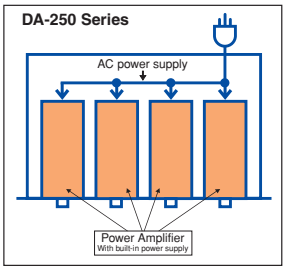
DA-250FH

DA-250F

Enhanced reliability for trouble-free operation.

Both amplifiers have been over-engineered to provide long term operation under demanding conditions. Fully independent power supplies for each of the 4 amplifier channels enhances reliability and allows uninterrupted operation in the event a channel should fail. This is a significant advantage in remote installations where service access may be difficult. Each unit also incorporates TOA's no-compromise build quality to minimize any problem as well as comprehensive protection circuitry.



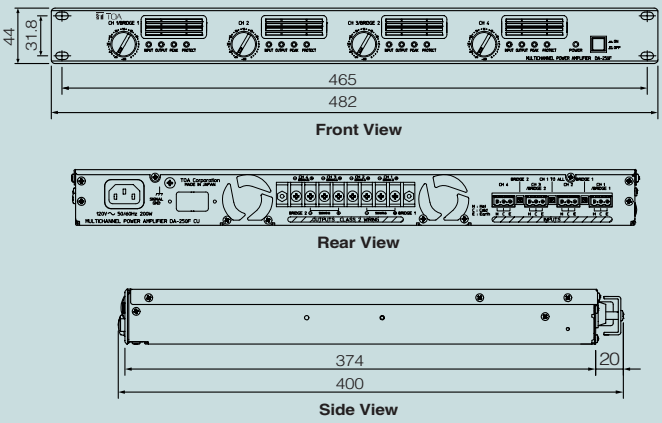


Comprehensive protection circuitry.

Advanced protection circuitry monitors voltage, current and thermal levels and disables output to minimize potential damage from overloads, short circuit, DC offset or overheating.

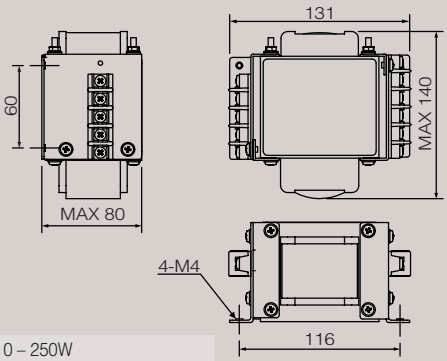
Control cover eliminates tampering.

Each amplifier includes attenuator security covers to prevent control settings from unauthorized adjustments.



MT-250H

Matching Transformer



Capacity:	0 – 250W
Primary impedance:	100V line : 40Ω/66.6Ω 70V line : 19.6Ω/32.6Ω
Secondary impedance:	100V line : 40Ω/66.6Ω 70V line : 19.6Ω/32.6Ω 50V line : 10Ω/16.6Ω
Frequency response:	30Hz – 18kHz(+0dB, –3dB)
Connection terminal:	M4 screw terminal, distance between barriers: 8.1mm
Weight:	3.7kg

SPECIFICATIONS

Model	DA-250F		DA-250FH	
	120V AC Version	220 – 240V AC Version	120V AC Version	220 – 240V AC Version
Number of channels	4	4	4	4
Total output all channel driven	1,000W (1kHz, 4Ω) 680W (1kHz, 8Ω)	1,000W (1kHz, 4Ω) 680W (1kHz, 8Ω)	1,000W (1kHz,19.6Ω)	1,000W (1kHz, 40Ω)
Output voltage per channel	31.6V (1kHz, 4Ω) 36.9V (1kHz, 8Ω)	31.6V (1kHz, 4Ω) 36.9V (1kHz, 8Ω)	70V (1kHz, 19.6Ω)	100V (1kHz, 40Ω)
Output current per channel	7.9A (1kHz, 4Ω) 4.6 A(1kHz, 8Ω)	7.9A(1kHz, 4Ω) 4.6A(1kHz, 8Ω)	3.6A(1kHz,19.6Ω)	2.5A(1kHz, 40Ω)
Power output				
8 ohms per channel	170W	170W	—	—
4 ohms per channel	250W	250W	—	—
16 ohms bridged	340W	340W	—	—
8 ohms bridged	500W	500W	—	—
Hi-Z: 70V/100V per channel	—	—	250W	250W
Hi-Z: 140V bridged, per channel	—	—	500W	—
Power consumption*				
Idle power consumption	56W, 1.0A	48W, 0.3A	58W, 1.0A	75W, 0.5A
1/8 Power 8 ohms Pink noise	183W, 3.0A	167W, 1.2A	—	—
4 ohms	257W, 4.2A	248W, 1.6A	—	—
70 Volts	—	—	265W, 4.1A	—
100 Volts	—	—	—	270W, 1.9A
1/3 Power 8 ohms	362W, 5.4A	349W, 2.4A	—	—
4 ohms	597W, 8.6A	511W, 3.7A	—	—
70 Volts	—	—	609W, 8.5A	—
100 Volts	—	—	—	491W, 3.5A
1/8 Power 8 ohms 1kHz	152W, 2.5A	143W, 1.0A	—	—
4 ohms	219W, 3.5A	202W, 1.4A	—	—
70 Volts	—	—	224W, 3.6A	—
100 Volts	—	—	—	230W, 1.6A
1/3 Power 8 ohms	314W, 4.7A	284W, 1.9A	—	—
4 ohms	507W, 7.3A	437W, 3.0A	—	—
70 Volts	—	—	499W, 7.2A	—
100 Volts	—	—	—	443W, 3.0A
Frequency response	20Hz – 20kHz, ±1dB	20Hz – 20kHz, ±1dB	20Hz – 20kHz, ±1dB (H.P.F.OFF) 50Hz – 20kHz, –3/+0dB (H.P.F. ON)	50Hz – 20kHz, –3dB, +0dB
Total harmonic distortion (THD) (1kHz)	0.1 %		0.1 %	
S/N ratio (A weighted)	100dB		100dB	
Crosstalk at 10kHz (A weighted)	70dB		70dB	
DC offset*	±5mV		±5mV	
Voltage gain*	29.5dB		35.1dB	
Damping factor*	100		120	
Inputs				
Input impedance	10kΩ (unbalanced), 20kΩ (balanced)		10kΩ (unbalanced), 20kΩ (balanced)	
Input sensitivity	+4dB (1.23V)		+4dB (1.23V)	
Input clipping	14V (25.1dBu)		14V (25.1dBu)	
Front panel				
Gain controls	30 position detent		30 position detent	
Indicators per channel: Input	Green LED		Green LED	
Output	Yellow LED		Yellow LED	
Peak	Red LED		Red LED	
Protect	Red LED		Red LED	
Power-On	Blue LED		Blue LED	
Rear panel				
Input connectors	Detachable Euro style terminal block (electrically balanced)		Detachable Euro style connector (electrically balanced)	
Speaker output	Screw terminal (M4). Accept AWG14-22		Screw terminal (M4). Accept AWG14-22	
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, 50,000 hours life time			
Power requirement	AC mains, 50/60Hz			
Operating Temperature	–10°C to +40°C			
Operating Humidity	Under 90% RH (no condensation)			
Dimensions (W × H × D)	482mm (19") × 44mm (1.7") × 401mm (15.8") (EIA Standard 19-inch rack mount width)			
Weight	6.6kg (14.6 lbs)	6.8kg (15.0 lbs)	6.6kg (14.6 lbs)	6.8kg (15.0 lbs)
Finish	Panel: Aluminum, alumite process, black Case: Plated steel sheet			
Accessory	Euro style terminal block connector (3-pin) × 4, Volume control cover × 4			
Option	—		Matching transformer: MT-250H	

0dB=0.775Vrms
*Typical data

TOA Corporation
www.toa.jp
Specifications are subject to change without notice.
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