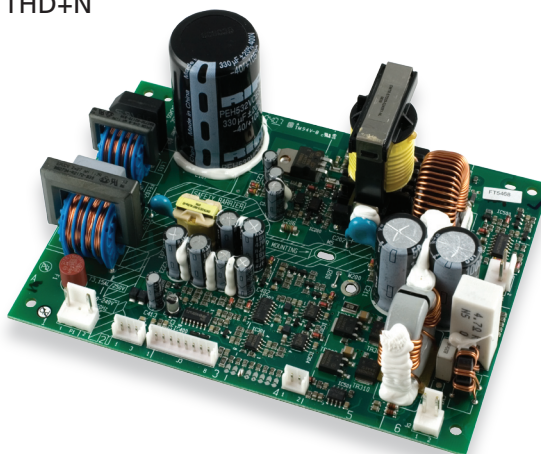


## ICEpower200ASC

Integrated Audio Power Solution

200W @ 0.2% THD+N



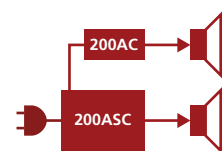
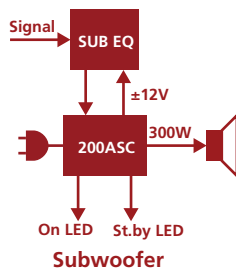
Dimensions: 10.7 x 15 x 5 cm

The ICEpower200ASC is an intelligent audio power solution designed particularly for highly competitive consumer and professional audio applications. The ICEpower200ASC is pre-approved for EMC and safety and the "black-box" completeness allows for fast design-in and minimized Time-to-Market.

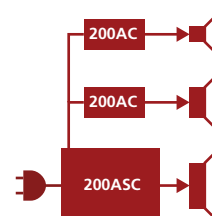
The ICEpower200ASC is an integrated power solution which completely eliminates the need for heat sinks and EMI shields. It also provides an auxiliary  $\pm 12V$  supply for external signal conditioning circuitry and an auto-on/off feature with input signal detection. The DC-bus output for powering additional ICEpower200AC amplifiers makes designing compact multi-way or multi-channel solutions easy.

### Applications:

- Active subwoofers
- Active speakers
- Stereo and multichannel amplifiers



**Stereo / 2-Way Speaker**



**3-Way Speaker**

### Key Specifications

- 200W @ 0.2% THD+N (10 Hz - 20 kHz,  $4\Omega$ )
- Short term maximum power 290W (10% THD+N /  $4\Omega$ ,  $230V_{AC}$ )
- Full audio bandwidth (70kHz/ $8\Omega$ )
- State-of-the-art audio specifications
  - 110dB dynamic range
  - THD+N = 0.008% @ 1W/100Hz
  - THD+N < 0.2%,  $100mW < P_o < 200W$  ( $4\Omega$ ,  $230V_{AC}$ )
- 79 % total efficiency (amplifier and power supply)

### Key Features

- Universal Mains SMPS ( $85V_{AC}$  to  $265V_{AC}$ , 47Hz - 63Hz)
- Standby mode with less than 0.5W power consumption
- Selectable auto-start with input signal detection
- On/Standby indicators with dual LED driver
- Input signal soft limiter for enhanced sound quality when overloaded
- $\pm 12V$  (max.200mA) DC output for powering external circuitry
- EMI conforms to: EN55013, FCC part 15 and others
- Safety conforms to: IEC 60065 7. ed (2001) and others

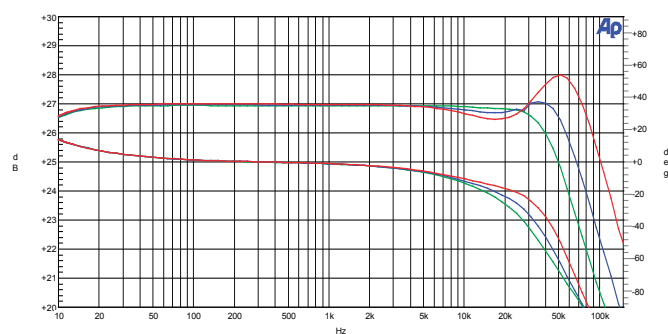
# Technical Specifications ICEpower200ASC

## Audio Specifications

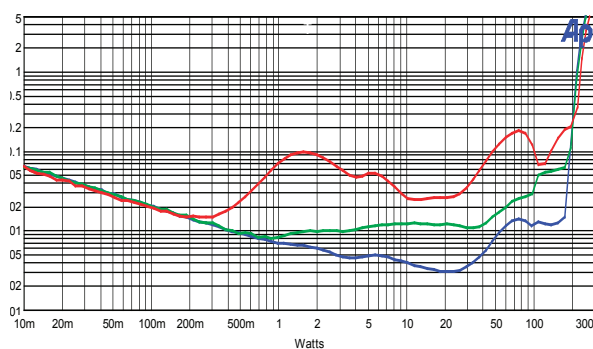
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$P_o$	Output power @ 1%THD+N (AES17 measurement filter) <sup>1)</sup>	230V <sub>ac</sub> / 50Hz, 120V <sub>ac</sub> / 60Hz 10Hz < f < 20kHz, R <sub>L</sub> = 4Ω	-	230	-	W
		100V <sub>ac</sub> / 50Hz	-	220	-	W
			-	210	-	W
THD+N	THD+N in 4Ω (AES17 measurement filter) <sup>1)</sup>	f = 100Hz, P <sub>O</sub> = 1W	-	0.008	0.02	%
THD+N	Maximal THD+N in 4Ω (AES17 measurement filter) <sup>1)</sup>	230V <sub>ac</sub> / 50Hz 10Hz < f < 20kHz 100mW < P <sub>O</sub> < 200W	-	0.2	0.3	%
V <sub>N.O</sub>	Output referenced idle noise	A-weighted 10Hz < f < 20kHz	75	90	125	μV
A <sub>V</sub>	Nominal Voltage Gain	f = 1 kHz	26.3	26.8	27.3	dB
f	Frequency response	20Hz - 20kHz, All loads	-	±0.5	±1.0	dB
f <sub>u</sub>	Upper bandwidth limit (-3dB)	R <sub>L</sub> = 8Ω R <sub>L</sub> = 4Ω	-	70 50	-	kHz
f <sub>l</sub>	Lower bandwidth limit (-3dB)	R <sub>L</sub> = All Loads	-	3.5	-	Hz
Z <sub>o</sub>	Abs. output impedance	f = 1kHz	-	10	20	mΩ
Z <sub>L</sub>	Load impedance range		3	4	∞	Ω
D	Dynamic range	A-weighted at 200W@4Ω	107	110	111	dB
IMD	Intermodulation (CCIF)	f = 14kHz, 15kHz, P <sub>O</sub> = 10W	-	0.0005	-	%
TIM	Transient intermodulation (TIM)	f <sub>1</sub> = 3.15kHz square, f <sub>2</sub> = 15kHz, P <sub>O</sub> = 10W	-	0.004	-	%

## Power Specifications

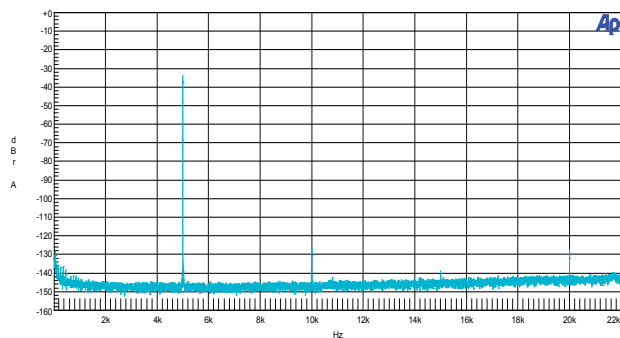
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V <sub>P</sub>	Nominal DC voltage	Off-line input within range	-	47	-	V
V <sub>CC</sub>	Positive analog supply	Off-line input within range	-	12	-	V
V <sub>SS</sub>	Negative analog supply	Off-line input within range	-	-12	-	V
t <sub>Pmax</sub>	Time of maximum rated output power	150W/4Ω out. No preheating.	-	120	-	s
P <sub>T</sub>	Continuous output power <sup>2)</sup> without thermal shutdown. 0-8kHz <sup>3)</sup>	Thermal stab. @ t <sub>a</sub> = 25 °C. 4Ω	-	40	-	W
P <sub>q</sub>	Quiescent power consumption	P <sub>O</sub> = 0W	-	5	-	W
P <sub>stby</sub>	Stand-by power consumption	Board in st.by mode (230V <sub>ac</sub> )	-	-	0.5	W
η	Power Efficiency	P <sub>O</sub> = 200W, 230V <sub>ac</sub> mains, 4Ω P <sub>O</sub> = 100W, 230V <sub>ac</sub> mains, 8Ω	-	79 78	-	%



Frequency response in 4Ω, 8Ω and open load. Top – amplitude. Bottom – phase.



THD+N vs. output power at 100Hz, 1kHz and 6.67kHz (4Ω). (AES17 measurement filter)



FFT Analysis. f = 5kHz. P<sub>O</sub> = 100mW. 4Ω loading.