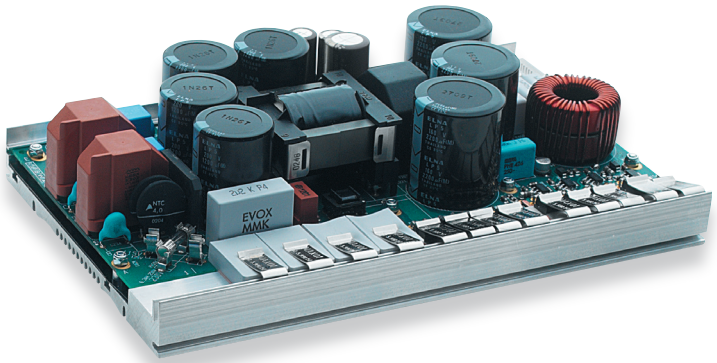
ICEpower1000ASP

Integrated Audio Power Solution

1000W @ 0.01% THD+N



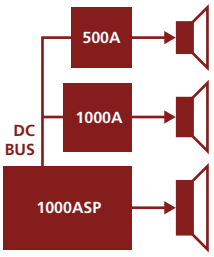
Dimensions: 15 x 23.3 x 5.7cm

The ICEpower1000ASP delivers an incredible 1000 watts of high-quality audio output power directly from selectable 115/230 volt mains. The built-in power supply also powers extra ICEpower A-series amplifiers and/or external signal conditioning circuitry to make a compact, versatile power solution in an ultra compact and lightweight package. The ICEpower1000ASP is EMC and Safety pre-approved to all relevant standards to reduce the cost of the design-in phase and ensure short Time-to-Market for the final product.

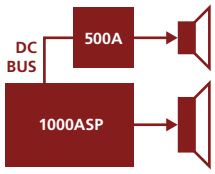
Applications:

The ICEpower1000ASP offers a sound quality to suit discerning high-end audio applications and the ruggedness to endure life on the road in professional audio equipment. The high performance, compact size and excellent reliability means the ICEpower1000ASP can be used in

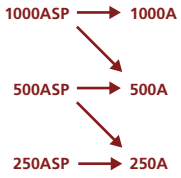
- Active speakers for professional touring, studio and installation use
- Stereo or multichannel amplifiers – high-end and high-power systems
- Active subwoofers - High power for professional and consumer use



3-Way Speaker



2-Way Speaker



Powering Options

The ICEpower ASP series offers the unique ICEpower DC-Bus concept for powering up to two additional A-series amplifiers from the integrated power supply. This full compatibility with the A-series offers a flexible and powerful building block concept for easy multiway or multichannel audio system design.

Key Features & Benefits

- High output power: 1000W @ 0.01% THD+N (1kHz, 4Ω)
- High linearity:
  - THD+N = 0.007% @ 1W/1kHz
  - IMD = 0.002 % (CCIF Measurement 19kHz/20kHz)
  - 80uV idle noise (119 dBA dynamic range)
- High efficiency: 83 % total efficiency (500W, 8Ω)
- EMI pre-approved to: EN55103-1, EN55103-2, FCC part 15
- Safety pre-approved to UL6500 and others
- Comprehensive protection scheme (Thermal, Overcurrent, HF)
- DC-Bus output for driving additional amplifier channels (A series) and auxillary circuits such as preamplifiers, crossover networks etc.
- Compact and rigid mechanical package which tolerates up to 70G shocks in all directions.

ice power

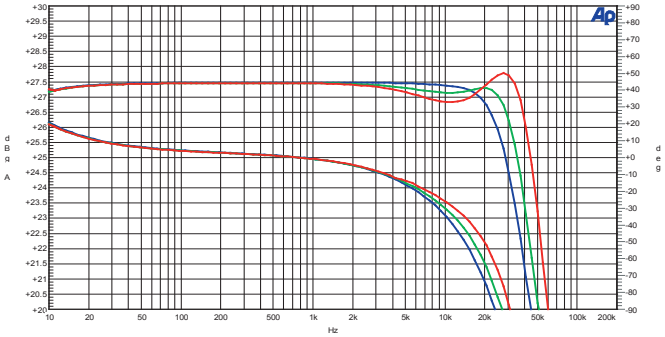
Technical Specifications ICEpower1000ASP

Audio Specifications

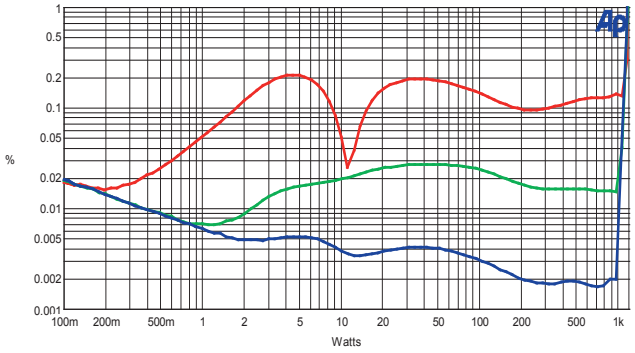
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
THD+N	THD+N in 4Ω (AES17 measurement filter)	f = 1kHz, P_O=1W	-	0.007	0.015	%
THD+N	Maximum THD+N in 4Ω (AES17 filter)	10Hz < f < 20kHz 100mW < Po < 1000W	-	0.2	0.3	%
$V_{N,O}$	Output referenced idle noise	A-weighted 10Hz < f < 20kHz	65	80	115	µV
D	Dynamic range	A-weighted	115	119	120	dB
A_V	Nominal Voltage Gain	f = 1 kHz	26.7	27.2	27.7	dB
f	Frequency response	20Hz - 20kHz, All loads	-	±0.5	±1	dB
f_u	Upper bandwidth limit (-3dB)	R_L = 8Ω R_L = 4Ω	- -	38 31	- -	kHz kHz
f_l	Lower bandwidth limit (-3dB)	R_L = 8Ω R_L = 4Ω	- -	5.3 5.3	- -	Hz Hz
Z_o	Abs. output impedance	f = 1kHz	-	5	10	mΩ
D_F	Damping factor	f = 100Hz, R_L = 8Ω	-	2000		
Z_L	Load impedance range		2	4	∞	Ω
IMD	Intermodulation (CCIF)	f =14kHz, 15kHz, P_O=10W	-	0.002	-	%
TIM	Transient intermodulation (TIM)	f_1 = 3.15kHz square, f_2 = 15kHz, P_O=10W	-	0.003	-	%

Power Specifications

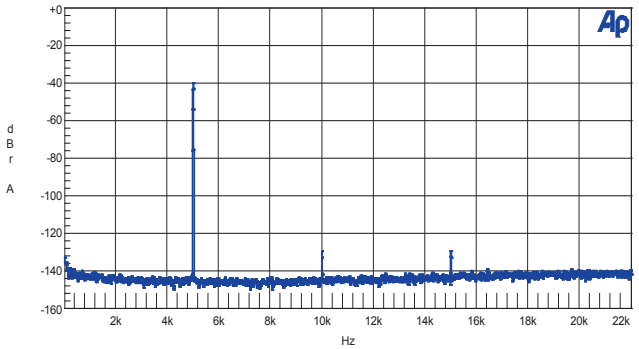
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
P_O	Max output power @ 0.1%THD+N, 1kHz (AES17 filter)	R_L = 4Ω. R_L=8Ω.	- - -	1100 600	- - -	W W W
V_{p1}	Nominal DC voltage 1	Off-line input within range	-	120	-	V
V_{p2}	Nominal DC voltage 2	Off-line input within range	-	80	-	V
Vcc	Positive analog supply	Off-line input within range	-	12.8	-	V
Vss	Negative analog supply	Off-line input within range	-	-12.8	-	V
t_{Pmax}	Time of maximum rated output power	1000W out. No preheating.	-	15	-	s
P_{FTC}	FTC rated output power 0-3kHz	4Ω, No external heatsink	-	150	-	W
Pq	Quiescent power dissipation	Po = 0W	-	15.8	-	W
Pstby	Stand-by power dissipation	Amplifier disabled	-	4.1	-	W
η	Power Efficiency	Po = 1000W, 4Ω. Po = 500W, 8Ω. 230V mains	-	79 82	-	%



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 at 5kHz. Po = 100mW. 4Ω loading.

Version 2.1

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