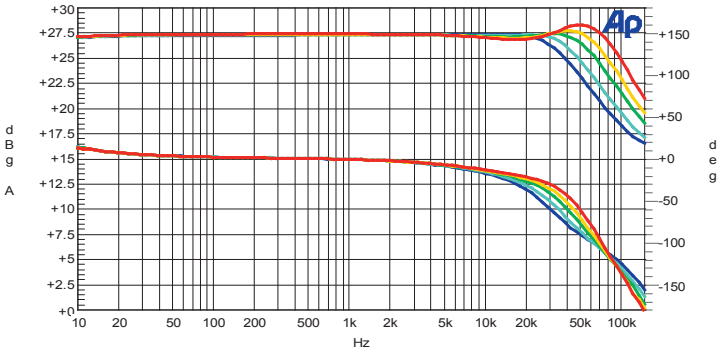
Technical Specifications ICEpower250A

Audio Specifications

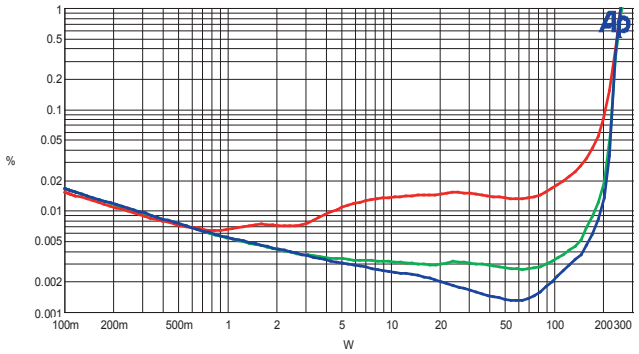
Symbol	Parameter	Conditions	Min	Typ	Max	Units
THD+N	THD+N, in 4 □ (AES17 meas filter)	f = 1KHz, P_O=1W		0.005	0.008	%
THD+N	Maximal THD+N, 4 □ (AES17 meas filter)	10Hz < f < 20kHz 100mW < P_O < 200W		0.07	0.1	%
THD	Low level THD	f=1kHz, 100mW, R_L = 4□		0.0005		□
V_No	Output ref idle noise	A-weighted 10Hz < f < 20kHz	70	85	100	□V
D	Dynamic range	A-weighted		113		dB
$V_{OFF, Diff}$	Output referenced offset	Terminated input			□25	mV
AV	Nominal Voltage Gain	f = 1kHz	27.1	27.4	27.7	dB
f	Frequency response	20Hz – 20kHz, all loads.		□0.3	□0.6	dB
f_u	Upper bandwidth limit (-3dB)	Z_L = 8 □		85		kHz
D_F	Damping factor	Z_L = 8 □□f = 100Hz		2000		
Z_L	Recommended Load range		2	4	□	□
IMD1	Intermodulation (CCIF)	f = 19kHz, 20kHz, P_O=10W		0.001	0.002	%
IMD2	Intermodulation (SMPTE)	f = 60Hz,7kHz(1:4), P_O=10W		0.02	0.03	%
PSRR	Power Supply Rejection Ratio of V_p	Voltage ripple @ f = 100 – 120 Hz	60			dB

Power Specifications

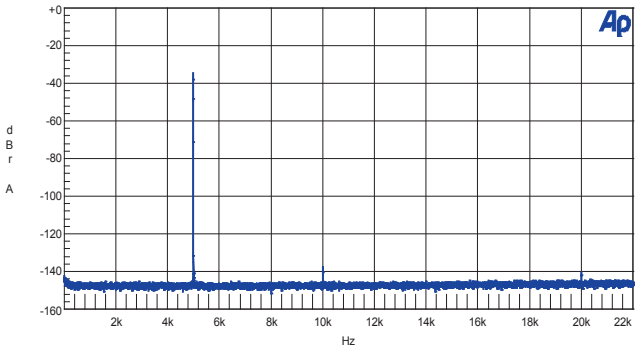
Symbol	Parameter	Conditions	Min	Typ	Max	Units
V_p	Power Supply	Operation	29	48	50	V
P_0	Max output power 1kHz @ 0.1% THD+N (AES17 filter) 1kHz	R_L =2.7□, V_p = 50V R_L = 4□, V_p = 50V R_L = 8□, V_p = 50V		300 210 125		W
I_{Vp}	Quiescent current	V_p = 48V	30	40	50	mA
I_{Vcc}	Quiescent current	V_{CC} = 12V	110	130	160	mA
I_{Vss}	Quiescent current	V_{SS} = -12V	10	20	30	mA
□	Power stage efficiency	R_L = 8□, P_0 = 100W		93		%



Frequency response in 2.7□, 4□, 8□□16Ω and open load.
Top – amplitude. Bottom – phase.



THD+N vs. output power at 100Hz, 1kHz and 5kHz in 4□ (AES17 measurement filter)



FFT Analysis. f = 5kHz. Po = 100mW 4 □ loading. THD = -101dB (0.0009%)

Version 2.1