

Technical Specifications ICEpower500A

Audio Specifications

Symbol	Parameter	Conditions	Min	Typ	Max	Units
THD+N	THD+N, in 4 \square (AES17 measurement filter)	$f = 1\text{kHz}, P_o = 1\text{W}$		0.006	0.01	%
THD+N	Maximal THD+N, 4 \square (AES17 filter)	$10\text{Hz} < f < 20\text{kHz}$ $100\text{mW} < P_o < 500\text{W}$		0.09	0.12	%
THD	Low level THD	$f = 1\text{kHz}, 100\text{mW}, R_L = 4\square$		0.0005		\square
$V_{w,o}$	Output referenced idle noise	A-weighted $10\text{Hz} < f < 20\text{kHz}$	65	75	115	\square V
D	Dynamic range	A-weighted		117		dB
$V_{OFF,DIF}$	Output referenced offset	Terminated input			\square 25	mV
AV	Nominal Voltage Gain	$f = 1\text{kHz}$	26.8	27.1	27.4	dB
f	Frequency response	20Hz - 20kHz, all loads.		\square 0.5	\square 1.0	dB
f_u	Upper bandwidth limit (-3dB)	$Z_L = 8\square$		75		kHz
D_f	Damping factor	$Z_L = 8\square, f = 100\text{Hz}$		2000		
Z_L	Load impedance range		2	4	\square	\square
IMD1	Intermodulation (CCIF)	$f = 19\text{kHz}, 20\text{kHz}, P_o = 10\text{W}$		0.0005	0.001	%
IMD2	Intermodulation (SMPTE)	$f = 60\text{Hz}, 7\text{kHz}(1:4), P_o = 10\text{W}$		0.02	0.03	%
PSRR	Power Supply Rejection Ratio of V_p	Voltage ripple @ $f = 100 - 120\text{Hz}$	60			dB

Power Specifications

Symbol	Parameter	Conditions	Min	Typ	Max	Units
V_p	Power Supply	Operation	42	75	80	V
P_o	Max output power 1kHz @ 0.1% THD+N (AES17 filter)	$R_L = 4\square, V_p = 80\text{V}$ $R_L = 8\square, V_p = 80\text{V}$ $P_o = 10\text{W}$		600 300		W
I_{vp}	Quiescent current	$V_p = 80\text{V}$	20	25	30	mA
I_{vcc}	Quiescent current	$V_{cc} = 12\text{V}$		200		mA
I_{vss}	Quiescent current	$V_{ss} = -12\text{V}$		25		mA
\square	Power stage efficiency	$R_L = 8\square, P_o = 300\text{W}$		93		%

