

AS 100.2

[Rev. 2.0 - 2012/06]

2-channel AB class amplifier

CEA-2006-A SPECIFICATIONS

POWER RATING: 100 Watt per channel @ 4 Ohm < 1% THD+N
SN RATIO: >90 dBA (reference: 1 Watt into 4 Ohm)

MOS SPECIFICATIONS (Tcase = 25 °C / 4 Ohm stereo / 0.2V input level @ 14.4 Volt if not otherwise specified)

TARGET POWERS:	100 Watt per channel @ 4 Ohm	
	160 Watt per channel @ 2 Ohm	
	320 Watt BTL mode @ 4 Ohm	
	500 Watt BTL mode @ 2 Ohm (*)	
EFFECTIVE POWERS:	107 Watt (81 Watt @12V6) x 2	22.5 A (η = 66.0 %) @ 4 Ohm / ST mode / 1% THD / 1KHz
	170 Watt (130 Watt @12V6) x 2	39.3 A (η = 60.0 %) @ 2 Ohm / ST mode / 1% THD / 1KHz
	340 Watt (260 Watt @12V6) x 1	39.3 A (η = 60.0 %) @ 4 Ohm / BTL mode / 1% THD / 1KHz
THD @ 4 Ohm / ST mode:		< 0.03 % (1KHz / 90% Power rating ref)
THD @ 2 Ohm / ST mode:		< 0.03 % (1KHz / 90% Power rating ref)
DIM @ 4 Ohm / ST mode:		< ----- % (Power rating ref)
DIM @ 2 Ohm / ST mode:		< ----- % (Power rating ref)
DC-DC converter typology:		Unregulated
Conversion frequency:		50 KHz (± 6 %)
Absolute maximum operation supply voltage range:		10 V ÷ 16 V
Recommended operation supply voltage range:		11 V ÷ 14.4 V
Power-on/Power-off Voltage Threshold:		9 V / 7.5 V
Mute delay time:		3 secs
Secondary voltages (Amp. / Driver / Pre.):		±33.1 V / ±7.7 V / ±13.5 V
Max output offset voltage (each channel):		±15 mV
Standby current:		1.8 mA (typical)
Quiescent consumption @ 12V6 / 14V4 :		0.44 A / 0.47 A (no idle current regulation)
Idle current regulation (no signal):		0.04 A (each channel)
Quiescent consumption @ 12V6 / 14V4:		0.52 A / 0.55 A (with idle current setted)
Thermal protection consumption:		0.8 A
Battery ground vs secondary ground decoupling:		125 Ohm
Body ground vs battery ground decoupling:		70 Ohm
Bandwidth (-3dB ÷ 1 Watt):		< 5 Hz ÷ 150 KHz
Input sensitivity (Power rating ref):		0.2 V ÷ 5 V
Input impedance @ 1 KHz (STEREO input):		11 KOhm
Input capacitance @ 1 KHz (STEREO input):		220 pF
Input ground decoupling:		15R
S/N ratio (AP filter 10 Hz - 500 KHz) – Power rating ref:		89 dB
S/N ratio (AP filter 10 Hz - 22 KHz) – Power rating ref:		109 dB (“A” weighted)
Eq. Input noise (AP filter 10 Hz - 500 KHz):		7.24 uV
Eq. Input noise (AP filter 10 Hz - 22 KHz):		0.7 uV (“A” weighted)
Channel separation@ 100Hz / 1KHz / 10KHz – 10 Watt ref:		89 dB / 80 dB / 62 dB
Xover functions:		HIGH Pass & LOW Pass (BAND Pass allowed)
		(20 ÷ 175Hz) & (50 ÷ 300Hz)
Filter slope - Filter “Q”:		12 dB/oct - 0.7 (Stereo & Mono)
Thermal cutoff Threshold:		88 °C (±5°C)
ProSPEED® Fan Controller Threshold:		55 °C (±5°C)
Damping factor @ 100 Hz - 10 Watt ref (Left / Right):		420 / 320
Damping factor @ 1 KHz - 10 Watt ref (Left / Right):		462 / 307
Damping factor @ 10 KHz - 10 Watt ref (Left / Right):		294 / 248
Output impedance @ 1 KHz - 10 Watt ref (Left / Right):		9 mOhm / 13 mOhm
Load drive limitations (*):		1 Ohm / 2 Ohm (Stereo / Bridged)
Suggested fuse:		40 A (Internal)

(*) **VERY IMPORTANT NOTE - READ CAREFULLY**

4 Ohm ST or 8 Ohm BTL – CONTINUOUS SINEWAVE SIGNAL – pure resistive load or speaker load
2 Ohm ST or 4 Ohm BTL – MUSICAL SIGNAL – pure resistive load or speaker load
1 Ohm ST or 2 Ohm BTL – MUSICAL SIGNAL – speaker load only