

AS 200.2

[Rev. 2.0 - 2012/06]

2-channel AB class amplifier

CEA-2006-A SPECIFICATIONS

POWER RATING: 200 Watt per channel @ 4 Ohm < 1% THD+N
SN RATIO: >85 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:
200 Watt per channel @ 4 Ohm
320 Watt per channel @ 2 Ohm
640 Watt BTL mode @ 4 Ohm
1000 Watt BTL mode @ 2 Ohm (*)

EFFECTIVE POWERS:
219 Watt (167 Watt @12V6) x 2 44.8 A ($\eta = 67.9\%$) @ 4 Ohm / ST mode / 1% THD / 1KHz
357 Watt (273 Watt @12V6) x 2 80.1 A ($\eta = 61.9\%$) @ 2 Ohm / ST mode / 1% THD / 1KHz
714 Watt (546 Watt @12V6) x 1 80.1 A ($\eta = 61.9\%$) @ 4 Ohm / BTL mode / 1% THD / 1KHz

THD @ 4 Ohm / ST mode: < 0.02 % (1KHz / 90% Power rating ref)
THD @ 2 Ohm / ST mode: < 0.02 % (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 ($\pm 6\%$)
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.): $\pm 46.8\text{ V} / \pm 7.5\text{ V} / \pm 13.5\text{ V}$
Max output offset voltage (each channel): $\pm 15\text{ mV}$
Standby current: 1.8 mA (typical)
Quiescent consumption @ 12V6 / 14V4: 0.67 A / 0.76 A (no idle current regulation)
Idle current regulation (no signal): 0.08 A (each channel)
Quiescent consumption @ 12V6 / 14V4: 0.80 A / 0.92 A (with idle current setted)
Thermal protection consumption: 1.1 A
Battery ground vs secondary ground decoupling: 125 Ohm
Body ground vs battery ground decoupling: 65 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: 93 dB
S/N ratio (AP filter 10 Hz - 22 KHz) – Power rating ref: 108 dB (“A” weighted)
Eq. Input noise (AP filter 10 Hz - 500 KHz): 4,81 uV
Eq. Input noise (AP filter 10 Hz - 22 KHz): 0.8 uV (“A” weighted)
Channel separation @ 100Hz / 1KHz / 10KHz – 10 Watt ref: 87 dB / 76 dB / 58 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 ($\pm 5^\circ\text{C}$)
ProSPEED® Fan Controller Threshold: 55 °C ($\pm 5^\circ\text{C}$)
Damping factor @ 100 Hz - 10 Watt ref (Right / Left): 173 / 253
Damping factor @ 1 KHz - 10 Watt ref (Right / Left): 171 / 276
Damping factor @ 10 KHz - 10 Watt ref (Right / Left): 151 / 204
Output impedance @ 1 KHz - 10 Watt ref (Right / Left): 23 mOhm / 14 mOhm
Load drive limitations (*): 1 Ohm / 2 Ohm (Stereo / Bridged)
Suggested fuse: 80 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