

AS 300.2

[Rev. 2.0 - 2012/06]

2-channel AB class amplifier

CEA-2006-A SPECIFICATIONS

POWER RATING: 300 Watt per channel @ 4 Ohm < 1% THD+N
SN RATIO: >86 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:
300 Watt per channel @ 4 Ohm
550 Watt per channel @ 2 Ohm
1100 Watt BTL mode @ 4 Ohm
1800 Watt BTL mode @ 2 Ohm (*)

EFFECTIVE POWERS:
330 Watt (260 Watt @12V6) x 2 67.8 A (η = 68.0 %) @ 4 Ohm / ST mode / 1% THD / 1KHz
562 Watt (432 Watt @12V6) x 2 123.4 A (η = 63.3 %) @ 2 Ohm / ST mode / 1% THD / 1KHz
1124 Watt (864 Watt @12V6) x 1 123.4 A (η = 63.3 %) @ 4 Ohm / BTL mode / 1% THD / 1KHz

THD @ 4 Ohm / ST mode: < 0.035 % (1KHz / 90% Power rating ref)
THD @ 2 Ohm / ST mode: < 0.035 % (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 (upper voltage limitation)
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.): ±52.3 V / ±7.5 V / ±13.5 V
Max output offset voltage (each channel): ±15 mV
Standby current: 1.8 mA (typical)
Quiescent consumption @ 12V: 1.4 A (no idle current regulation)
Idle current regulation (no signal): 0.1 A (each channel)
Quiescent consumption @ 12V: 1.6 A (with idle current setted)
Thermal protection consumption: 1.7 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: 110 dB (“A” weighted)
Eq. Input noise (AP filter 10 Hz - 500 KHz): 5,29 uV
Eq. Input noise (AP filter 10 Hz - 22 KHz): 0.75 uV (“A” weighted)
Channel separation @ 100Hz / 1KHz / 10KHz – 10 Watt ref: 83 dB / 76 dB / 60 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 (Right / Left): 168 / 228
Damping factor @ 1 KHz - 10 Watt ref (Right / Left): 163 / 221
Damping factor @ 10 KHz - 10 Watt ref (Right / Left): 114 / 160
Output impedance @ 1 KHz - 10 Watt ref (Right / Left): 24.5 mOhm / 18.1 mOhm
Load drive limitations (*): 1 Ohm / 2 Ohm (Stereo / Bridged)
Suggested fuse: 150 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