

# 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)

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

(\*) **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