

AS 100.4

4-channel AB class amplifier

[Rev. 2.0 – 2014/02]

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	
	155 Watt per channel @ 2 Ohm	
	310 Watt BTL mode @ 4 Ohm	
	480 Watt BTL mode @ 2 Ohm (*)	
EFFECTIVE POWERS:	110 Watt (80 Watt @12V6) x 4	46.6 A (η = 65.5 %) @ 4 Ohm / ST mode / 1% THD / 1KHz
	162 Watt (118 Watt @12V6) x 4	79.8 A (η = 56.4 %) @ 2 Ohm / ST mode / 1% THD / 1KHz
	324 Watt (236 Watt @12V6) x 2	79.8 A (η = 56.4 %) @ 4 Ohm / BTL mode / 1% THD / 1KHz
THD @ 4 Ohm / ST mode:		< 0.02 % (1KHz / 90% Power rating ref)
THD @ 2 Ohm / ST mode:		< 0.03 % (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.):		±34 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:		0.61 A / 0.65 A (no idle current regulation)
Idle current regulation (no signal):		0.04 A (each channel)
Quiescent consumption @ 12V6 / 14V4:		0.77 A / 0.81 A (with idle current setted)
Thermal protection consumption:		1 A
Battery ground vs secondary ground decoupling:		1 KOhm
Body ground vs battery ground decoupling:		70 Ohm
Bandwidth (-3dB ÷ 1 Watt):		< 5 Hz ÷ 200 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:		90 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):		6.42 uV
Eq. Input noise (AP filter 10 Hz - 22 KHz):		0.64 uV (“A” weighted)
Channel separation@ 100Hz / 1KHz / 10KHz – 10 Watt ref:		79 dB / 72 dB / 54 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):		89 / 108 [Front] - 133 / 175 [Rear]
Damping factor @ 1 KHz - 10 Watt ref (Right / Left):		89 / 109 [Front] - 131 / 170 [Rear]
Damping factor @ 10 KHz - 10 Watt ref (Right / Left):		82 / 99 [Front] - 115 / 151 [Rear]
Output impedance @ 1 KHz - 10 Watt ref:		45 mOhm / 37 mOhm [Front] - 30 mOhm / 23 mOhm [Rear]
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