

ZERO 1

2-channel AB class amplifier

[Rev 2.0 – 2012.04]

CEA-2006-A SPECIFICATIONS

POWER RATING: 450 Watt per channel @ 4 Ohm < 1% THD+N
SN RATIO: >73 dBA (reference: 1 Watt into 4 Ohm)

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

TARGET POWERS:	450 Watt per channel @ 4 Ohm	650 Watt per channel @ 4 Ohm (HyperDrive mode)
	1700 Watt BTL mode @ 4 Ohm	2400 Watt BTL mode @ 4 Ohm (HyperDrive mode)
	3000 Watt BTL mode @ 2 Ohm (*)	[T.B.D.] Watt BTL mode @ 2 Ohm (HyperDrive mode)
EFFECTIVE POWERS:	464 Watt (464 Watt @12V6) x 2	97.7 A (η = 65.9 %) @ 4 Ohm / ST mode / 1% THD / 1KHz
	872 Watt (872 Watt @12V6) x 2	201.8 A (η = 60.1 %) @ 2 Ohm / ST mode / 1% THD / 1KHz
	1744 Watt (1744 Watt @12V6) x 1	201.8 A (η = 60.1 %) @ 4 Ohm / BTL mode / 1% THD / 1KHz
THD @ 4 Ohm / ST mode:		< 0.060 % (1KHz / 90% Power rating ref)
THD @ 2 Ohm / ST mode:		< 0.065 % (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:		Regulated
Conversion frequency:		40 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. / Drive / Pre.):		±61.5 V / ±11 V / ±15.7 V
Max output offset voltage (each channel):		±15 mV
Standby current:		1.8 mA (typical)
Quiescent consumption @ 12V6 (no idle current regulation):		1.25 / 1.38 A (HyperDrive activated)
Idle current regulation (no signal - HyperDrive activated):		0.05 A (each channel)
Quiescent consumption @ 12V6 (HyperDrive activated):		1.48 A (with idle current setted)
Thermal protection consumption:		2.0 A
Battery ground vs secondary ground decoupling:		1 KOhm
Body ground vs battery ground decoupling:		65 Ohm
Bandwidth (-3dB ÷ 1 Watt):		< 5 Hz ÷ 100 KHz
Input sensitivity (Power rating ref):		0.43 V ÷ 9.5 V (1.2V ÷ 27V in High Level mode)
Input impedance @ 1 KHz (STEREO input):		11 Kohm (47 Ohm in High Level mode)
Input capacitance @ 1 KHz (STEREO input):		220 pF
Input ground decoupling:		47R
S/N ratio (AP filter 10 Hz - 500 KHz) – Power rating ref:		60 dB
S/N ratio (AP filter 10 Hz - 22 KHz) – Power rating ref:		101 dB (“A” weighted)
Eq. Input noise (AP filter 10 Hz - 500 KHz):		428 uV
Eq. Input noise (AP filter 10 Hz - 22 KHz):		3.81 uV (“A” weighted)
Channel separation @ 100Hz / 1KHz / 10KHz – 10 Watt ref:		64 dB / 64 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 (Right / Left):		6351 / 6354
Damping factor @ 1 KHz - 10 Watt ref (Right / Left):		6368 / 6365
Damping factor @ 10 KHz - 10 Watt ref (Right / Left):		424 / 424
Output impedance @ 1 KHz - 10 Watt ref (Right / Left):		0.6 mOhm / 0.6 mOhm
Load drive limitations (*):		1 Ohm / 2 Ohm (Stereo / Bridged)
Special features:		HyperDrive - Switch to increase output power up to 50% more - WARNING! OverCold - Switch to disable the ProSPEED® feature. Fans start always at max speed. 250 A (External)
Suggested fuse:		

(*) **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