

ZERO 4

4-channel AB class amplifier

[Rev 1.0 – 2012.11]

CEA-2006-A SPECIFICATIONS

POWER RATING: 100 Watt & 210 Watt per channel @ 4 Ohm < 1% THD+N
SN RATIO: >80 dBA & >76 dBA (reference: 1 Watt into 4 Ohm)

MOS SPECIFICATIONS (Tcase = 25 °C / MAX sens. / Low Level input mode @ 12.6 Volt if not otherwise specified)

NOMINAL POWERS:

2 x 100W @ 4 ST + 2 x 210W @ 4 ST
2 x 145W @ 2 ST + 2 x 325W @ 2 ST
2 x 88W @ 4 ST + 1 x 670W @ 4 BTL
2 x 145W @ 2 ST + 1 x 650W @ 4 BTL
1 x 290W @ 4 BTL + 1 x 650W @ 4 BTL
1 x 245W @ 4 BTL + 1 x 900W @ 2 BTL
1350W absolute maximum total power @ 2 BTL

POWER ASSIGNMENT

[CH1 & CH2] = Low Power Channels (2 x 100W)
[CH3 & CH4] = High Power Channels (2 x 210W)

====> [CH1>BTL<CH2] + [CH3>BTL<CH4]

EFFECTIVE POWERS:

2x106 @ 4 ST + **2x223** @ 4 ST
2x156 @ 2 ST + **2x340** @ 2 ST
2x92 @ 4 ST + **1x703** @ 4 BTL
2x156 @ 2 ST + **1x680** @ 4 BTL
1x312 @ 4 BTL + **1x680** @ 4 BTL

84.1 A ($\eta = 62.1\%$) @ 4 Ohm / ST mode / 1% THD / 1KHz
147.7 A ($\eta = 53.3\%$) @ 2 Ohm / ST mode / 1% THD / 1KHz
126.8 A ($\eta = 55.5\%$) @ 4 Ohm / ST + BTL mode / 1% THD / 1KHz
147.7 A ($\eta = 53.3\%$) @ 2 + 4 Ohm / ST + BTL mode / 1% THD / 1KHz
147.7 A ($\eta = 53.3\%$) @ 4 Ohm / BTL mode / 1% THD / 1KHz

DC-DC converter typology:

Conversion frequency:

Absolute maximum operation supply voltage range:

Recommended operation supply voltage range:

Power-on/Power-off Voltage Threshold:

Mute delay time:

Secondary voltages (Amp. / Drive / Pre.):

Max output offset voltage (each channel):

Standby current:

Quiescent consumption:

Idle current regulation (no signal):

Quiescent consumption:

Thermal protection consumption:

Battery ground vs secondary ground decoupling:

Body ground vs battery ground decoupling:

Bandwidth (-3dB ÷ 1 Watt):

Input sensitivity (Power rating ref):

Input impedance @ 1 KHz (STEREO input):

Input capacitance @ 1 KHz (STEREO input):

Signal ground decoupling:

S/N ratio (AP filter 10 Hz - 500 KHz) – Power rating ref:

S/N ratio (AP filter 10 Hz - 22 KHz) – Power rating ref:

Channel separation @ 100Hz / 1KHz / 10KHz – 10 Watt ref:

Xover functions [CH1 & CH2]:

Frequency range [FILTER 1] (Hz):

Frequency range [FILTER 2] (Hz):

Filter slope - Filter "Q":

Xover functions [CH3 & CH4]:

Frequency range (Hz):

Filter slope - Filter "Q":

Thermal cutoff Threshold:

ProSPEED® Fan Controller Threshold:

Damping factor @ 100 Hz - 10 Watt ref [CH1 / CH2 ÷ CH3 / CH4]:

Damping factor @ 1 KHz - 10 Watt ref [CH1 / CH2 ÷ CH3 / CH4]:

Damping factor @ 10 KHz - 10 Watt ref [CH1 / CH2 ÷ CH3 / CH4]:

Load drive limitations [CH1, CH2, CH3 & CH4]:

Recommended fuse:

Regulated

39 KHz ($\pm 6\%$)

10 V ÷ 16 V

11 V ÷ 14.4 V

9 V / 7.5 V

3 secs

± 34.9 V [CH1 & CH2] & ± 49.5 V [CH3 & CH4] / ± 10.5 V / ± 15.3 V

± 15 mV

1.8 mA (typical)

1.4 A (no idle current regulation)

0.1 A (each channel)

1.8 A (with idle current setted)

1.7 A

RCD network

65 Ohm

5 Hz ÷ 125 KHz [CH1 & CH2] / 5 Hz ÷ 85 KHz [CH3 & CH4]

0.39 V ÷ 8.6 V (1.1V ÷ 25V in High Level mode)

11 Kohm (47 Ohm in High Level mode)

220 pF

47R (~ 500 KOhm in High Level mode)

>77 dB [CH1 & CH2] / > 73 dB [CH3 & CH4]

>100 dB "A" [CH1 & CH2] / > 99 dB "A" [CH3 & CH4]

83 dB / 83 dB / 76 dB [CH1 & CH2] / 74 dB / 74 dB / 62 dB [CH3 & CH4]

2 x HIGH Pass or LOW Pass (BAND Pass allowed using both FILTER 1 & FILTER 2)

20 ÷ 175 (x1) / 200 ÷ 1750 (x10)

50 ÷ 300 (x1) / 1000 ÷ 6000 (x20)

12 dB/oct - 0.7 (24dB/oct using both FILTER 1 & FILTER 2 of the same type)

HIGH Pass & LOW Pass (BAND Pass allowed)

20 ÷ 175 (HIGH Pass) / 50 ÷ 300 (LOW Pass)

12 dB/oct - 0.7 (HIGH Pass & LOW Pass)

95 °C ($\pm 5^\circ\text{C}$)

55 °C ($\pm 5^\circ\text{C}$)

315 / 275 ÷ 710 / 1050

316 / 264 ÷ 712 / 902

218 / 192 ÷ 213 / 243

1 Ohm (STEREO mode) / 2 Ohm (BTL mode) (*) **READ CAREFULLY**

150 A (Internal)

(*) WORKING CONDITION BEYOND THE RECOMMENDED LIMITS MAY CAUSE PERMANENT DAMAGE TO THE AMPLIFIER

4 Ohm ST or 8 Ohm BTL – CONSTANT SINE WAVE SIGNAL – **pure resistive or nominal speaker**

2 Ohm ST or 4 Ohm BTL – MUSICAL / DYNAMIC SIGNAL – **pure resistive or nominal speaker**

1 Ohm ST or 2 Ohm BTL – MUSICAL / DYNAMIC SIGNAL – **nominal speaker only**