

PRO 4|10

4-channel AB class amplifier

[Rev. 3.0 – 2017/09]

CEA-2006-A SPECIFICATIONS

POWER RATING: **120 Watt per channel @ 4 Ohm < 1% THD+N**
SN RATIO: **>74 dBA / >95 dBA (DDSP) [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: **120 Watt per channel @ 4 Ohm** Typical application:
160 Watt per channel @ 2 Ohm **106x2 + 386x1 (CH1/2 @ 4 Ohm/ST + CH3/4 @ 4 Ohm/BTL)**
320 Watt BTL mode @ 4 Ohm

EFFECTIVE POWERS: **121 Watt (92 Watt @12V6) x 4** 52.7 A ($\eta = xx.x \%$) @ 4 Ohm / ST mode / 1% THD / 1KHz
167 Watt (127 Watt @12V6) x 4 88.0 A ($\eta = xx.x \%$) @ 2 Ohm / ST mode / 1% THD / 1KHz
334 Watt (254 Watt @12V6) x 2 88.0 A ($\eta = xx.x \%$) @ 4 Ohm / BTL mode / 1% THD / 1KHz

THD @ 4 Ohm / ST mode: < **0.035 % (1KHz)**
THD @ 2 Ohm / ST mode: < **0.04 % (1KHz)**
DIM @ 4 Ohm / ST mode: < ---- % (Power rating ref)
DIM @ 2 Ohm / ST mode: < ---- % (Power rating ref)

DC-DC converter typology / Conversion frequency: **Unregulated Push-Pull / 50 KHz ($\pm 6 \%$)**
Supply voltage range operation: **10 V ÷ 16 V (Absolute maximum) / 11 V ÷ 14.4 V (Recommended)**
Power-on/Power-off Voltage Threshold: **9 V / 7.5 V**
Mute delay time: **4 secs.**
Secondary voltages (VDD / DRIVE / SERV): **$\pm 38.2 V / \pm 12.5 V / \pm 13.3 V$**
Max output offset voltage (each channel): **$\pm 15 mV$**
Standby current: **< 1 mA (typical)**
Quiescent consumption @ 12V6 / 14V4: **0.52 A / 0.59 A (no idle current regulation)**
Idle current regulation (no signal): **0.15 A (each channel)**
Quiescent consumption @ 14V4: **0.89 A (with idle current setted)**
Thermal protection consumption: **140 mA**
Ground decoupling: **47R (RCA Input) / 1 KOhm (battery vs secondary) / 68 Ohm (body vs battery)**
Bandwidth (-3dB ÷ 1 Watt): **< 5 Hz ÷ 135 KHz**
Input sensitivity (Power rating ref): **0.35 V ÷ 12 V (5.3 V in DDSP mode)**
Input impedance @ 1 KHz (STEREO input): **15 KOhm (LL) / 47 Ohm (HL)**
S/N ratio (with AP filter) – Power rating ref: **81 dB (filter: 10 Hz - 500 KHz) / 94 dB (filter: 10 Hz - 22 KHz “A” weighted)**
S/N ratio DDSP (with AP filter) – Power rating ref: **89 dB (filter: 10 Hz - 500 KHz) / 116 dB (filter: 10 Hz - 22 KHz “A” weighted)**
Eq. Input noise (with AP filter): **31.9 uV (filter: 10 Hz - 500 KHz) / 6.44 uV (filter: 10 Hz - 22 KHz “A” weighted)**
Channel separation @ 100Hz / 1KHz / 10KHz – 10 Watt ref: **58 dB / 56 dB / 45 dB**
Xover functions (selectable filters): **CH1/2= HP: 43 ÷ 500Hz(x1) or 430 ÷ 5000Hz(x10) [12 dB/oct – Q: 0.7]**
CH3/4= HP: 50 ÷ 200Hz & LP:(430 ÷ 5000Hz) [12 dB/oct – Q: 0.7]

Special features: **DDSP - Direct DSP (bypass all the preamplifier circuitry but the differential input interface)**
HL/LL - High Level / Low Level selectable input
Controlled via uC – Internally controlled via Atmel Processor
95 °C ($\pm 5^{\circ}C$)
50 °C ($\pm 5^{\circ}C$)
453 / 396 [CH1/2] - 219 / 374 [CH3/4]
455 / 398 [CH1/2] - 220 / 399 [CH3/4]
199 / 245 [CH1/2] - 94 / 246 [CH3/4]
8.8 mOhm / 10.1 mOhm [CH1/2] - 18.2 mOhm / 10.0 mOhm [CH1/2]
2 Ohm / 4 Ohm (Stereo / Bridged)
80 A (Internal)
235 / 205 / 55
2,4

Thermal cutoff Threshold:
ProSPEED® Fan Controller Threshold:
Damping factor @ 100 Hz - 10 Watt ref:
Damping factor @ 1 KHz - 10 Watt ref:
Damping factor @ 10 KHz - 10 Watt ref:
Output impedance @ 1 KHz - 10 Watt ref:
Load drive limitations (*):
Suggested fuse:
Size (mm):
Weight (Kg):

(*) 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

