

## PRO 4|10

4-channel AB class amplifier

[ Rev. 3.1 – 2017/11 ]

### 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  
160 Watt per channel @ 2 Ohm  
320 Watt BTL mode @ 4 Ohm

Typical application:  
106x2 + 386x1 (CH1/2 @ 4 Ohm/ST + CH3/4 @ 4 Ohm/BTL)

**EFFECTIVE POWERS:** 121 Watt (92 Watt @12V6) x 4  
167 Watt (127 Watt @12V6) x 4  
334 Watt (254 Watt @12V6) x 2

52.7 A ( $\eta = xx.x\%$ ) @ 4 Ohm / ST mode / 1% THD / 1KHz  
88.0 A ( $\eta = xx.x\%$ ) @ 2 Ohm / ST mode / 1% THD / 1KHz  
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):**  $\pm 38.2\text{ V} / \pm 12.5\text{ V} / \pm 13.3\text{ V}$   
**Max output offset voltage (each channel):**  $\pm 15\text{ mV}$   
**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 trimmer)  
**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: 18 ÷ 220Hz & LP:(43 ÷ 500Hz) [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

**Thermal cutoff Threshold:** Controlled via uC – Internally controlled via Atmel Processor  
**ProSPEED® Fan Controller Threshold:** 95 °C ( $\pm 5\text{°C}$ )  
**Damping factor @ 100 Hz - 10 Watt ref:** 50°C ( $\pm 5\text{°C}$ )  
**Damping factor @ 1 KHz - 10 Watt ref:** 453 / 396 [CH1/2] - 219 / 374 [CH3/4]  
**Damping factor @ 10 KHz - 10 Watt ref:** 455 / 398 [CH1/2] - 220 / 399 [CH3/4]  
**Output impedance @ 1 KHz - 10 Watt ref:** 199 / 245 [CH1/2] - 94 / 246 [CH3/4]  
**Load drive limitations (\*):** 8.8 mOhm / 10.1 mOhm [CH1/2] - 18.2 mOhm / 10.0 mOhm [CH1/2]  
**Suggested fuse:** 2 Ohm / 4 Ohm (Stereo / Bridged)  
**Size (mm):** 80 A (Internal)  
**Weight (Kg):** 235 / 205 / 55  
2,4

(\*) 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

