

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
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 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 μV (filter: 10 Hz - 500 KHz) / 6.44 μV (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 ($\pm 5\text{°C}$)
50 °C ($\pm 5\text{°C}$)
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

