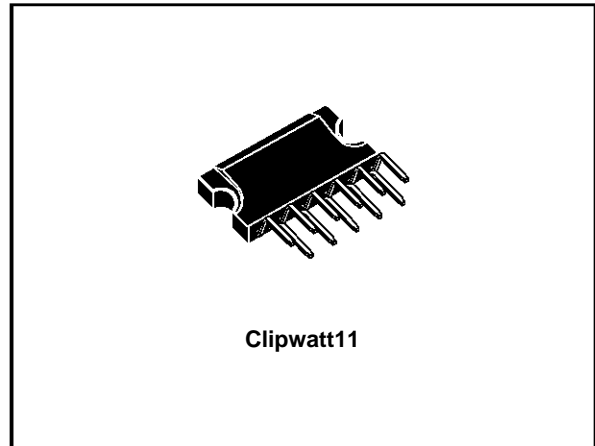


8W AMPLIFIER WITH MUTING

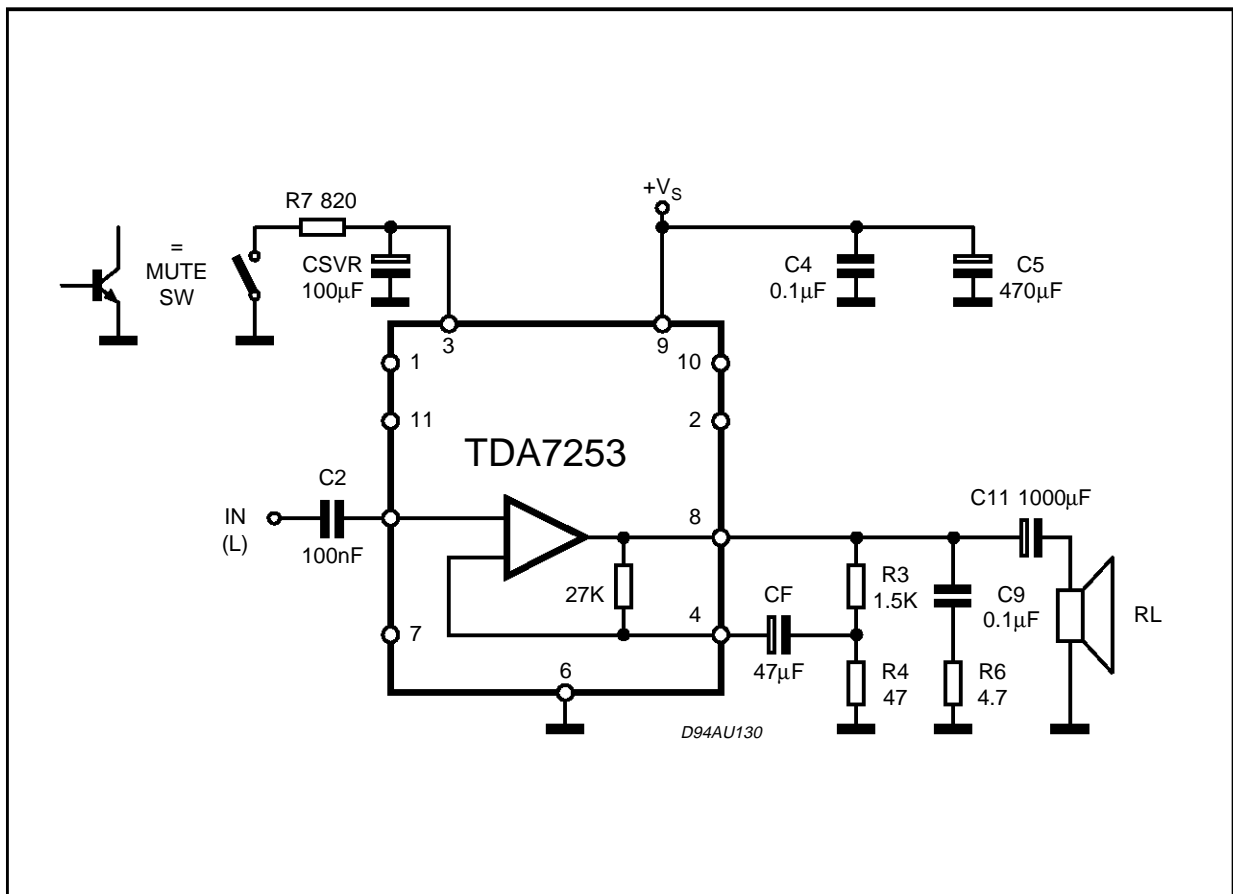
- WIDE SUPPLY VOLTAGE RANGE
- 8W @ $V_S=26V$, $R_L = 8\Omega$, THD=10%
- MUTE FACILITY (POP FREE) WITH LOW CONSUMPTION
- AC SHORT CIRCUIT PROTECTION
- THERMAL OVERLOAD PROTECTION (150°C)

DESCRIPTION

The TDA7253 is class AB audio power amplifier assembled in the new Clipwatt package.



APPLICATION CIRCUIT



ABSOLUTE MAXIMUM RATINGS

| Symbol | Parameter | Value | Unit |
|--------------|---|------------|------------------|
| V_S | Supply Voltage | 35 | V |
| I_o | Output Peak Current (repetitive $f > 20\text{Hz}$) | 2.5 | A |
| I_o | Output Peak Current (non repetitive, $t = 100\mu\text{s}$) | 3.5 | A |
| P_{tot} | Total Power Dissipation ($T_{case} = 70^\circ\text{C}$) | 25 | W |
| T_{op} | Operating Temperature Range | 0 to 70 | $^\circ\text{C}$ |
| $T_{stg,Tj}$ | Storage & Junction Temperature | -40 to 150 | $^\circ\text{C}$ |

PIN CONNECTION (Top view)

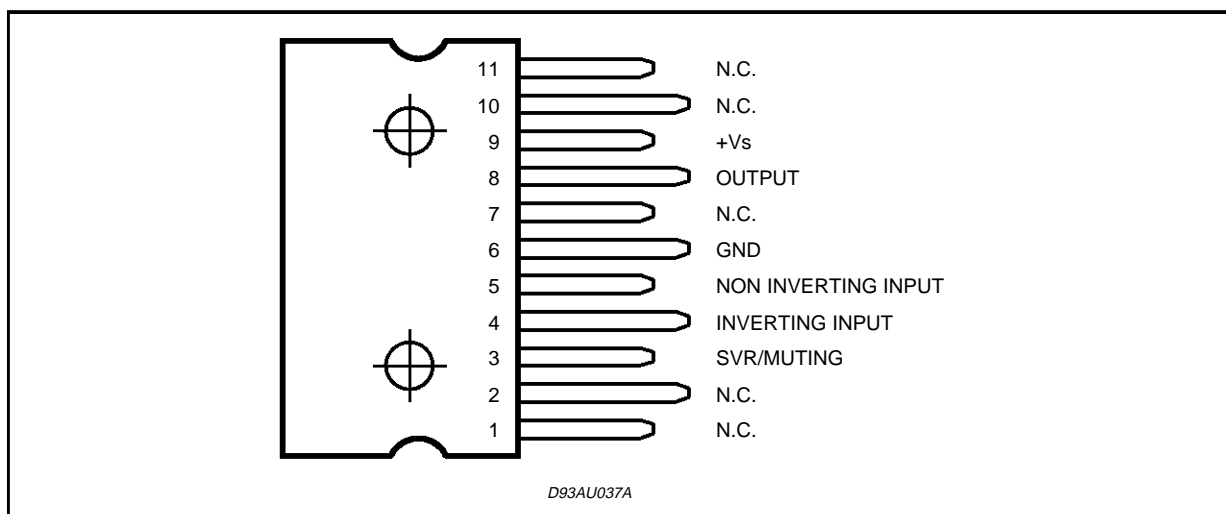
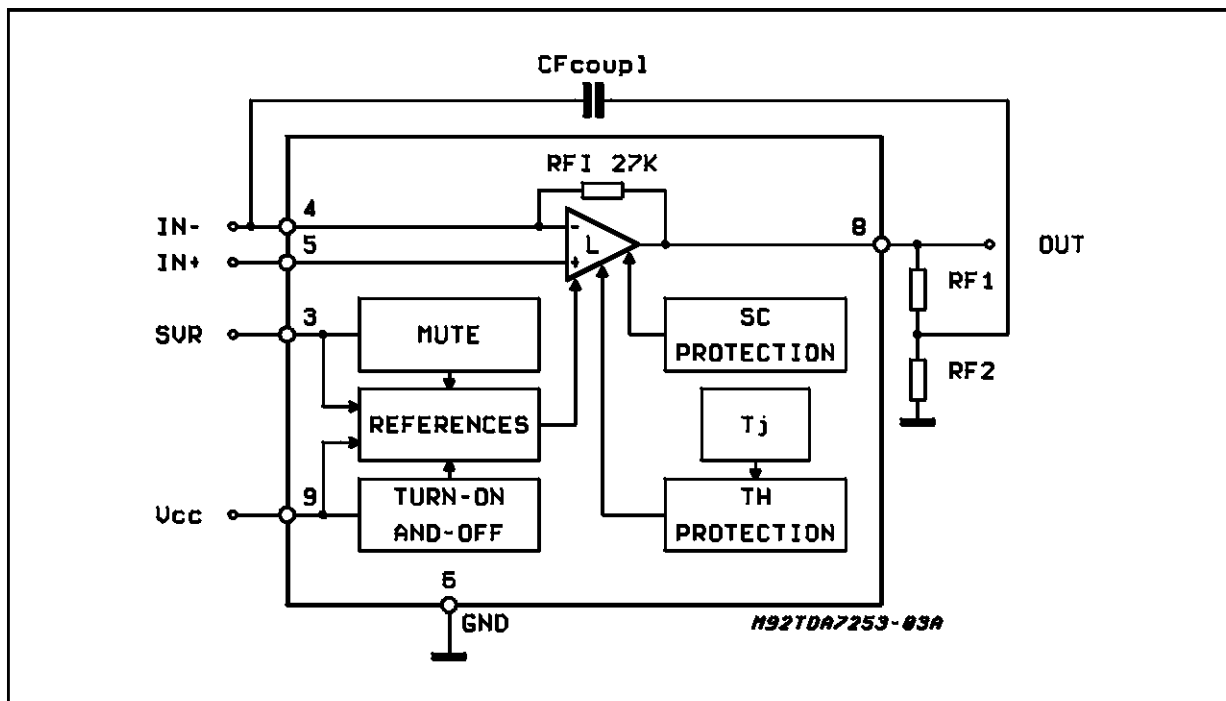


Figure 1: Application Circuit



THERMAL DATA

| Symbol | Parameter | Value | Unit |
|------------------------|-------------------------------------|-------|------|
| R _{th j-case} | Thermal resistance junction to case | Max 3 | °C/W |

ELECTRICAL CHARACTERISTICS (Refer to the test and application circuit, V_S = 26V; R_L = 8Ω; G_v = 30dB; f = 1KHz; T_{amb} = 25°C unless otherwise specified.)

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Unit |
|---------------------|--------------------------------|--|------|----------|------|----------|
| V _S | Supply Voltage | | 10 | | 32 | V |
| V _O | Quiescent Output Voltage | | | 12.5 | | V |
| I _q | Total Quiescent Current | | | 40 | | mA |
| P _O | Output Power | d = 10% d = 1% | 8 | 10 8 | | W W |
| d | Total Harmonic Distortion | P _O = 1W | | 0.03 | | % |
| R _I | Input Resistance | | 100 | 200 | | KΩ |
| f _L | Low Frequency Roll-off (-3dB) | | | 40 | | Hz |
| f _H | High Frequency Roll-off (-3dB) | | | 80 | | KHz |
| e _N | Total Input Noise Voltage | A Curve; R _S = 10KΩ f = 22Hz to 22KHz; R _S = 10KΩ | | 2 2.5 | 10 | mV μV |
| SVR | Supply Voltage Rejection | R _S = 10KΩ; f = 100Hz; V _r = 0.5V | | 60 | | dB |
| V _{T MUTE} | Mute Threshold | | | 0.8 | | V |
| V _{T PLAY} | Play Threshold | | 5 | | | V |
| A _M | Mute Attenuation | | 80 | 100 | | dB |
| I _{q MUTE} | Quiescent Current Mute | | | 7 | 10 | mA |

Note: to avoid pop-on noise $\frac{C_F}{C_{SVR}} \leq 1$

Figure 1: Output Power vs. Supply Voltage

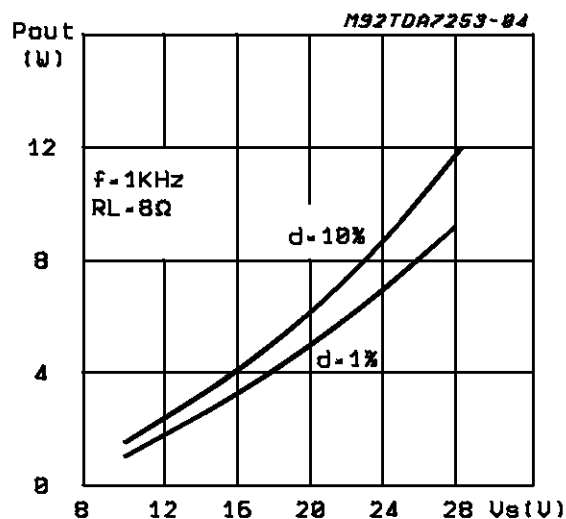
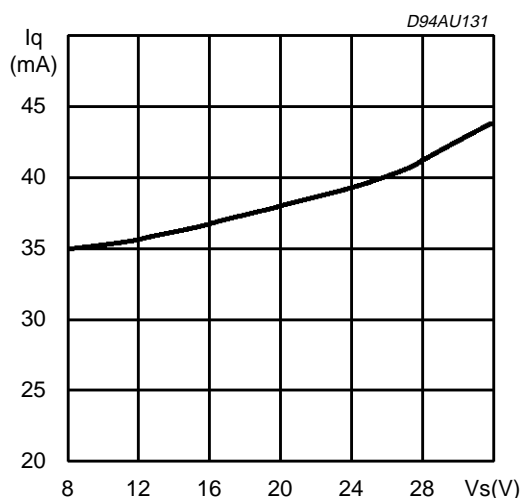
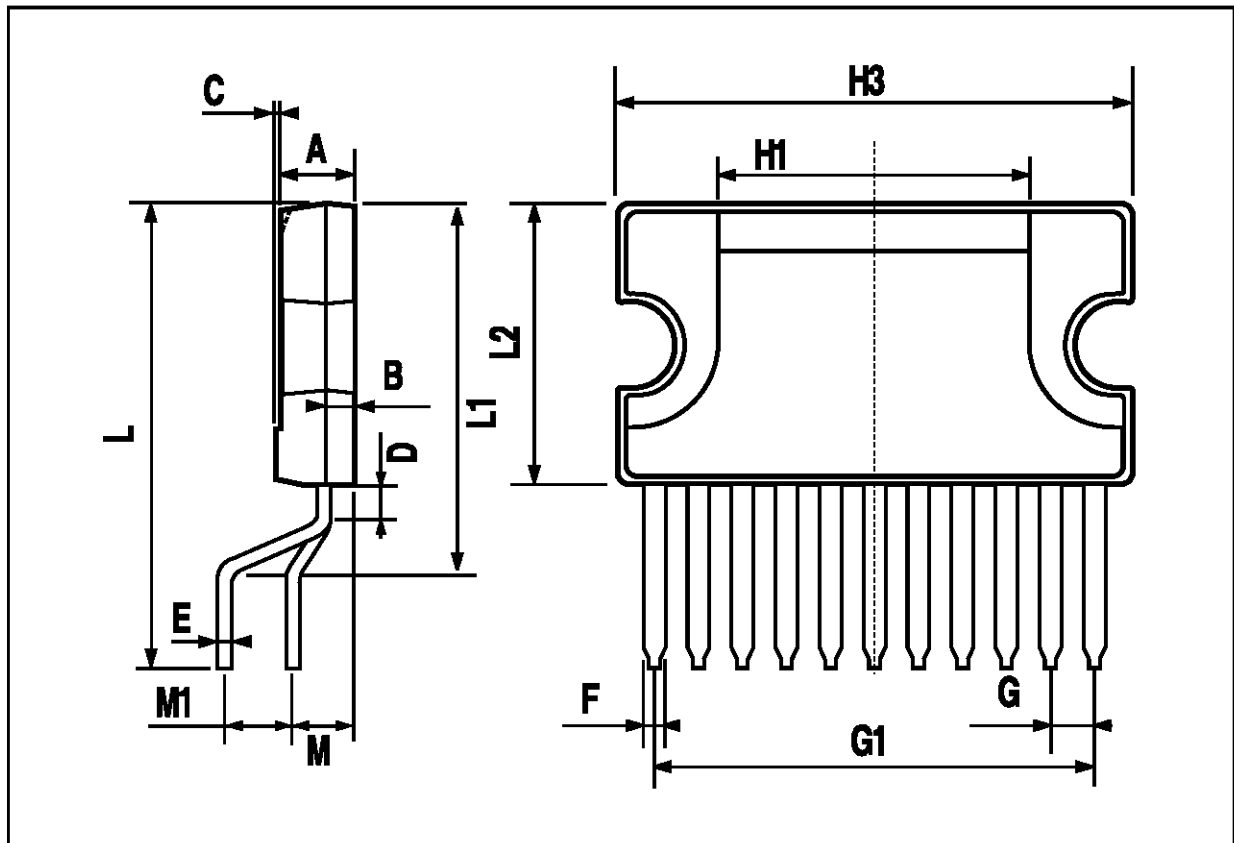


Figure 2: Quiescent Current vs. Supply Voltage



CLIPWATT11 PACKAGE MECHANICAL DATA

| DIM. | mm | | | inch | | |
|------|------|-------|------|------|-------|-------|
| | MIN. | TYP. | MAX. | MIN. | TYP. | MAX. |
| A | | | 3.10 | | | 0.122 |
| B | | | 1.10 | | | 0.04 |
| C | | 0.15 | | | 0.006 | |
| D | | 1.50 | | | 0.059 | |
| E | | 0.52 | | | 0.02 | |
| F | | 0.80 | | | 0.03 | |
| G | | 1.70 | | | 0.066 | |
| G1 | | 17.00 | | | 0.66 | |
| H1 | | 12.00 | | | 0.48 | |
| H3 | | 20.00 | | | 0.79 | |
| L | | 17.90 | | | 0.70 | |
| L1 | | 14.40 | | | 0.57 | |
| L2 | | 11.00 | | | 0.43 | |
| M | | 2.54 | | | 0.1 | |
| M1 | | 2.54 | | | 0.1 | |



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