

# UTC TDA2822M LINEAR INTEGRATED CIRCUIT

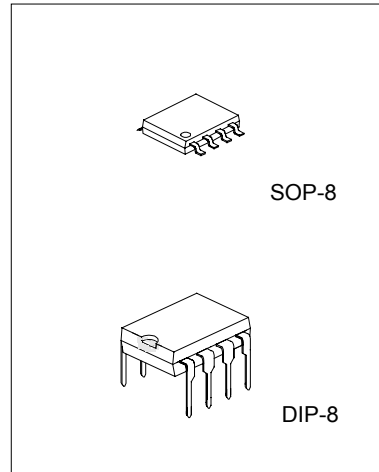
## DUAL LOW VOLTAGE POWER AMPLIFIER

### DESCRIPTION

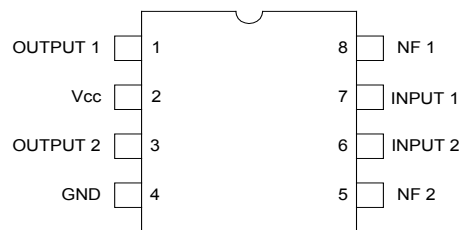
The UTC TDA2822M is a monolithic integrated audio amplifier in a 8-Pin plastic dual in line package. It is designed for portable cassette players and radios.

### FEATURES

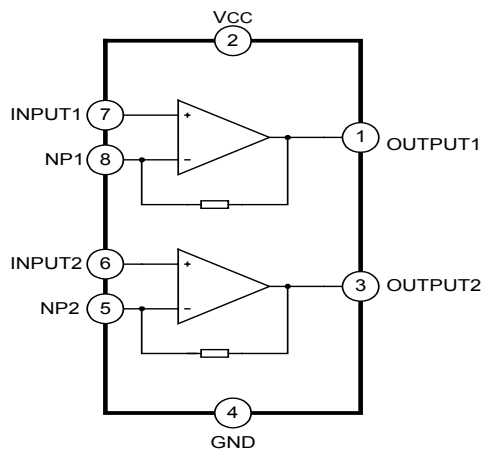
- \*Wide operating supply voltage:  $V_{cc}=1.8V-12V$ .
- \*Low crossover distortion.
- \*Low quiescent circuit current.
- \*Bridge/stereo configuration.



### PIN CONFIGURATIONS



### BLOCK DIAGRAM



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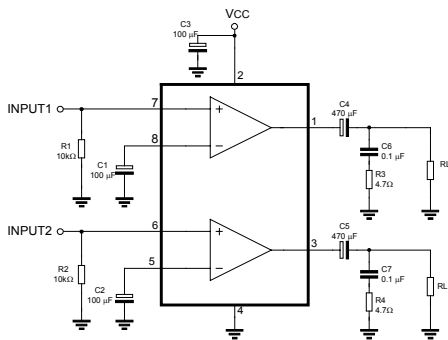
## ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

| PARAMETER             | SYMBOL   | VALUE  | UNIT |
|-----------------------|----------|--|------|
| Supply Voltage        | Vcc      | 15   | V    |
| Output Peak Current   | Io(peak) | 1  | A    |
| Power Dissipation     | Pd       | DIP at Tamb=50°C 1.0<br>SOP at Tamb=50°C 0.5 | W    |
| Operating Temperature | Topr     | -20 ~ +70                                    | °C   |
| Storage Temperature   | Tstg     | -40 ~ +150                                   | °C   |

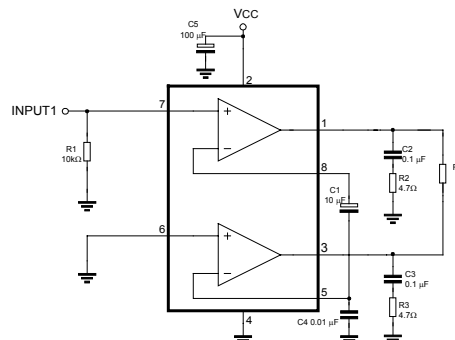
## ELECTRICAL CHARACTERISTICS (Ta=25°C, VCC=6V, f=1kHz, unless otherwise specified)

| PARAMETER                 | SYMBOL | TEST CONDITIONS                | MIN                   | TYP                    | MAX | UNIT |
|---------------------------|--------|--------------------------------|-----------------------|------------------------|-----|------|
| Operating Supply Voltage  | Vcc    |                                | 1.8                   |                        | 12  | V    |
| Quiescent Circuit Current | Icc    | Vi=0                           |                       | 9                      |     | mA   |
| Closed Loop Voltage Gain  | Av     | Stereo                         |                       | 40                     |     | dB   |
| Closed Loop Voltage Gain  | Av     | Bridge                         |                       | 40                     |     | dB   |
| Channel Balance           | CB     | Stereo                         | -1                    | 0                      | 1   | dB   |
| Output Power              | Po     | Stereo, Vcc=6V, RL=4Ω, THD=10% | 0.4(DIP)<br>0.28(SOP) | 0.65(DIP)<br>0.45(SOP) |     | W    |
| Output Power              | Po     | Stereo, Vcc=3V, RL=4Ω, THD=10% |                       | 0.11(DIP)<br>0.07(SOP) |     | W    |
| Output Power              | Po     | Bridge, Vcc=6V, RL=4Ω, THD=10% | 0.9(DIP)<br>0.63(SOP) | 1.35(DIP)<br>0.94(SOP) |     | W    |
| Output Power              | Po     | Bridge, Vcc=6V, RL=4Ω, THD=10% |                       | 0.35(DIP)<br>0.24(SOP) |     | W    |
| Total Harmonic Distortion | THD    | Stereo, RL=8Ω, Po=0.2W         |                       | 0.5                    |     | %    |
| Total Harmonic Distortion | THD    | Bridge, RL=8Ω, Po=0.5W         |                       | 0.5                    |     | %    |
| Ripple Rejection          | RR     | Stereo, f=100Hz, C3=100μF      | 24                    | 30                     |     | dB   |
| Output Noise Voltage      | VNO    | Stereo, BW(-3dB)=20Hz ~20kHz   |                       | 0.5                    | 2.0 | mV   |
| Cross Talk                | CT     | Stereo, f=1kHz                 |                       | 50                     |     | dB   |
| Input Resistance          | Ri     |                                | 100                   |                        |     | kΩ   |

TEST CIRCUIT 1: STEREO

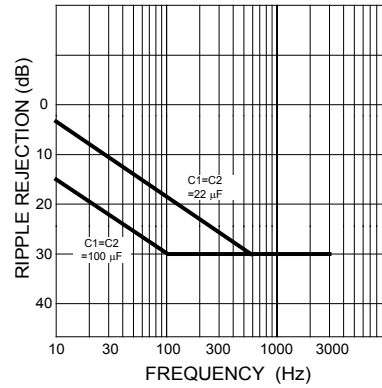
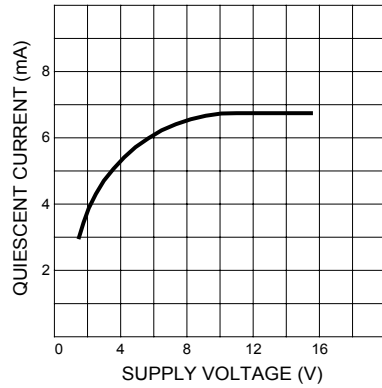


TEST CIRCUIT 2: BRIDGE

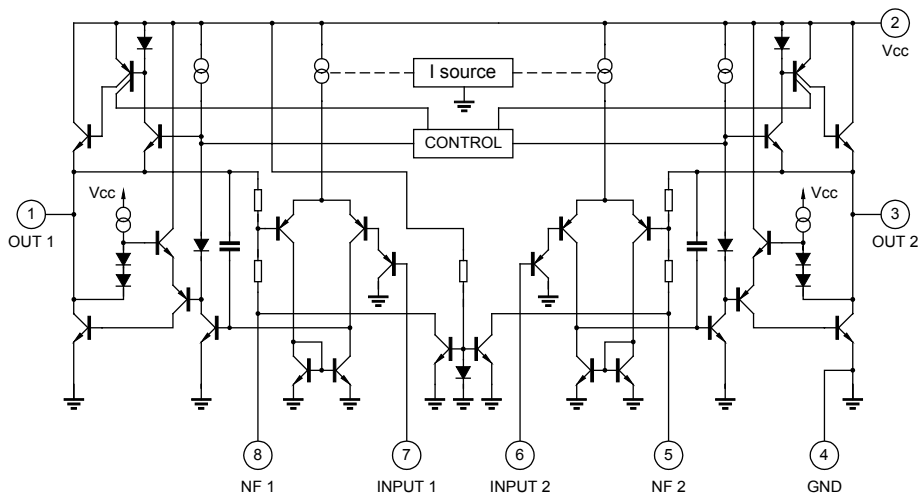


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## TYPICAL PERFORMANCE CHARACTERISTICS



## SCHEMATIC DIAGRAM



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