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NTE1882 Integrated Circuit Module – AF Power Amp, 100W Min, Dual Power Supplies

Features:

- Compact packaging supports slimmer set designs
- Simpler heat sink design facilitates thermal design of slim stereo sets
- Current mirror circuit application reduces distortion to 0.08%.
- Supports addition of electronic circuits for thermal shutdown and load–short protection circuit as well as pop noise muting which occurs when the power supply switch is turned on and off

Absolute Maximum Ratings: ($T_A = \pm 25^\circ\text{C}$ unless otherwise specified)

| | |
|--|-------------------------------------|
| Maximum Supply Voltage, V_{CCmax} | $\pm 73\text{V}$ |
| Thermal Resistance, Junction–to–Case, R_{thJC} | 1.1°C/W |
| Junction Temperature, T_J | $+150^\circ\text{C}$ |
| Operating Substrate Temperature, T_C | $+125^\circ\text{C}$ |
| Storage Temperature Range, T_{stg} | -30° to $+125^\circ\text{C}$ |
| Available Time for Shorted Load ($V_{CC} = \pm 51\text{V}$, $R_L = 8\Omega$, $f = 50\text{Hz}$, $P_O = 100\text{W}$), t_s | 1sec |

Recommended Operating Conditions: ($T_A = \pm 25^\circ\text{C}$ unless otherwise specified)

| | |
|--|------------------|
| Recommended Supply Voltage, V_{CC} | $\pm 51\text{V}$ |
| Load Resistance, R_L | 8Ω |

Operating Characteristics: ($T_A = \pm 25^\circ\text{C}$, $V_{CC} = \pm 51\text{V}$, $R_L = 8\Omega$, $V_G = 40\text{dB}$, $R_g = 600\Omega$, 100k LPF ON, R_L (non–inductive))

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---------------------------|------------|---|-----|-----------|------|-------------------|
| Quiescent Current | I_{CCO} | $V_{CC} = \pm 61\text{V}$ | 15 | – | 120 | mA |
| Output Power | P_O | THD = 0.08%, $f = 20\text{Hz}$ to 20kHz | 100 | – | – | W |
| Total Harmonic Distortion | THD | $P_O = 1.0\text{W}$, $f = 1\text{kHz}$ | – | – | 0.08 | % |
| Frequency Response | f_L, f_H | $P_O = 1.0\text{W}$, +0dB, –3dB | – | 20 to 50k | – | Hz |
| Input Resistance | r_i | $P_O = 1.0\text{W}$, $f = 1\text{kHz}$ | – | 55 | – | k Ω |
| Output Noise Voltage | V_{NO} | $V_{CC} = \pm 61\text{V}$, $R_{gm} = 10\text{k}\Omega$ | – | – | 1.2 | mV _{rms} |
| Midpoint Voltage | V_N | $V_{CC} = \pm 61\text{V}$ | –70 | 0 | 70 | mV |

Note 1 Output noise voltage represents the peak value on the rms scale (VTVM). The noise voltage waveform does not include the pulse noise.

Pin Connection Diagram (Front View)

| | |
|----|---------------------|
| 15 | Bootstrap |
| 14 | V (+) |
| 13 | Output |
| 12 | V (-) |
| 11 | Compensation |
| 10 | I _{Adjust} |
| 9 | Emitter Bypass |
| 8 | Compensation |
| 7 | I _{Adjust} |
| 6 | Test Point |
| 5 | Bypass |
| 4 | Bias |
| 3 | Substrate |
| 2 | NFB |
| 1 | Input |

