

NTE1815 Integrated Circuit Module, AF PO, 20W, Dual Power Supply

Features:

- Small-Sized Package Allows Audio Sets to be made Slimmer
- Facilitates Thermal Design of Slim Stereo Sets
- Constant-Current Circuit Minimizes Pop Noise During Power ON/OFF
- Possible to Design Electronic Supplementary Circuits:
 - Pop Noise Muting During Power ON/OFF
 - Load Short-Circuit Protector
 - Thermal Shutdown

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

Maximum Supply Voltage, $V_{CC\text{max}}$	$\pm 34.5\text{V}$
Junction Temperature, T_J	$+150^\circ\text{C}$
Operating Case Temperature, T_C	$+125^\circ\text{C}$
Storage Temperature Range, T_{stg}	-30° to $+125^\circ\text{C}$
Thermal Resistance, Junction-to-Case, R_{thJC}	2.6°C/W
Available Time for Load Shorted ($V_{CC} = \pm 23\text{V}$, $R_L = 8\Omega$, $f = 50\text{Hz}$, $P_O = 20\text{W}$), t_s	2sec

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

Recommended Supply Voltage, V_{CC}	$\pm 23\text{V}$
Load Resistance, R_L	8Ω

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $V_{CC} = \pm 23\text{V}$, $R_L = 8\Omega$ (Non-Inductive Load), $R_g = 600\Omega$, $V_G = 40\text{dB}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Current	I_{CCO}	$V_{CC} = \pm 28\text{V}$	10	20	50	mA
Output Power	P_O	THD = 0.4%, $f = 20\text{Hz}$ to 20kHz	20	—	—	W
		$V_{CC} = \pm 20\text{V}$, THD = 1%, $R_L = 4\Omega$, $f = 1\text{kHz}$	20	—	—	W
Total Harmonic Distortion	THD	$P_O = 1\text{W}$, $f = 1\text{kHz}$	—	—	0.3	%
Frequency Response	f_L, f_H	$P_O = 1\text{W}$ +0dB, -3dB	20 to 50k			Hz
Input Resistance	r_i	$P_O = 1\text{W}$, $f = 1\text{kHz}$	—	55	—	k Ω
Output Noise Voltage	V_{NO}	$V_{CC} = \pm 28\text{V}$, $R_g = 10\text{k}\Omega$, Note 2	—	—	1.2	mV _{rms}
Middle-Point Voltage	V_N	$V_{CC} = \pm 28\text{V}$	-70	0	+70	mV

Note 1. For power supply at the time of test, use a constant-voltage power supply unless otherwise specified.

Note 2. The output noise voltage represents the peak value on the RMS scale (V_{TMV}) of average value indicating type. The noise voltage waveform includes no flicker noise.

Pin Connection Diagram (Front View)

15	Bootstrap
14	(+) V _{CC}
13	Output
12	(-) V _{CC}
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

