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

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

Recommended Supply Voltage, $V_{CC}$ .....	±23V
Load Resistance, $R_L$ .....	8Ω

**Electrical Characteristics:** ( $T_A = +25^\circ\text{C}$ ,  $V_{CC} = \pm 23V$ ,  $R_L = 8\Omega$  (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	$I_{CCO}$	$V_{CC} = \pm 28V$	10	20	50	mA
Output Power	$P_O$	THD = 0.4%, $f = 20\text{Hz}$ to $20\text{kHz}$	20	-	-	W
		$V_{CC} = \pm 20V$ , THD = 1%, $R_L = 4\Omega$ , $f = 1\text{kHz}$	20	-	-	W
Total Harmonic Distortion	THD	$P_O = 1W$ , $f = 1\text{kHz}$	-	-	0.3	%
Frequency Response	$f_L, f_H$	$P_O = 1W$ +0dB, -3dB	20 to 50k			Hz
Input Resistance	$r_i$	$P_O = 1W$ , $f = 1\text{kHz}$	-	55	-	kΩ
Output Noise Voltage	$V_{NO}$	$V_{CC} = \pm 28V$ , $R_g = 10\text{k}\Omega$ , Note 2	-	-	1.2	mV <sub>rms</sub>
Middle-Point Voltage	$V_N$	$V_{CC} = \pm 28V$	-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)

<b>15</b>	Bootstrap
<b>14</b>	(+) V <sub>CC</sub>
<b>13</b>	Output
<b>12</b>	(-) V <sub>CC</sub>
<b>11</b>	Compensation
<b>10</b>	I Adjust
<b>9</b>	Emitter Bypass
<b>8</b>	Compensation
<b>7</b>	I Adjust
<b>6</b>	Test Point
<b>5</b>	Bypass
<b>4</b>	Bias
<b>3</b>	Substrate
<b>2</b>	NFB
<b>1</b>	Input

