

## NTE1685 Integrated Circuit Dual AF Power Amp, 3.5W

**Features:**

- High Output: 3.5W typ. x 2
- Soft Clip, Causing Little Harmonic Disturbance to Radios
- Small Pop Noise at the Time of Power Switch ON/OFF
- Built-in Protector Against Abnormal Modes (Thermal Shutdown, Overvoltage)

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

Maximum Supply Voltage, $V_{CCmax}$ .....	25V
Maximum Output Current, $I_{Opeak}$ .....	2.0A
Allowable Power Dissipation, $P_{dmax}$ .....	7.5W
Operating Temperature Range, $T_{opr}$ .....	$-20^\circ$ to $+75^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	$-40^\circ$ to $+150^\circ\text{C}$

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

Recommended Supply Voltage, $V_{CC}$ .....	16V
Operating Supply Voltage Range, $V_{CC}$ .....	9V to 24V
Recommended Load Resistance, $R_L$ .....	$8\Omega$

**Electrical Characteristics:** ( $T_A = +25^\circ\text{C}$ ,  $V_{CC} = 16\text{V}$ ,  $R_L = 8\Omega$ ,  $f = 1\text{kHz}$ ,  $R_g = 600\Omega$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Current	$I_{CCO}$		–	46	62	mA
Voltage Gain	$V_G$		48	50	52	dB
Output Power	$P_O$	THD = 10%	3.0	3.5	–	W
Total Harmonic Distortion	THD	$P_O = 0.5\text{W}$	–	0.3	1.0	%
Output Noise Voltage	$V_{NO}$	$R_g = 10\text{k}\Omega$ , BW = 20Hz to 20kHz	–	0.65	1.5	mW
Ripple Rejection Ratio	$R_r$	$R_g = 0$ , $V_r = 500\text{mV}$	40	50	–	dB
Crosstalk	CT	$R_g = 10\text{k}\Omega$ , BW = 20Hz to 20kHz	40	55	–	dB
Channel Balance	$\Delta\text{VG}$		–	–	1.5	dB

**Pin Connection Diagram**  
(Front View)

