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## NTE1027 Integrated Circuit Module – Hybrid, Audio Power Amplifier

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

Maximum Supply Voltage,  $V_{CCmax}$  ..... 48V  
 Operating Case Temperature,  $T_C$  .....  $+90^\circ\text{C}$   
 Storage Temperature Range,  $T_{stg}$  .....  $-30^\circ$  to  $+100^\circ\text{C}$   
 Available Load Shorting Time ( $V_{CC} = 32\text{V}$ ,  $P_O = 10\text{W}$ ,  $R_L = 8\Omega$ ,  $f = 50\text{Hz}$ ),  $t_s$  ..... 2sec

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

Supply Voltage,  $V_{CC}$  ..... 32V  
 Load Resistance,  $R_L$  .....  $8\Omega$

**Electrical Characteristics:** ( $T_A = +25^\circ\text{C}$ ,  $V_{CC} = 32\text{V}$ ,  $R_L = 8\Omega$ ,  $R_g = 600\Omega$ ,  $f = 1\text{kHz}$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Current	$I_{CCO}$		10	20	50	mA
Output Power	$P_O$	THD = 1%	10	13	–	W
Voltage Gain	VG	$P_O = 100\text{mW}$	32	33	34	dB
Total Harmonic Distortion	THD	$P_O = 100\text{mW}$	–	–	0.5	%
Input Impedance	$r_i$	$P_O = 100\text{mW}$	20	40	–	$k\Omega$
Output Impedance	$r_o$	$P_O = 100\text{mW}$	–	0.2	–	$\Omega$
High Level Cut-Off Frequency	$f_{CH}$	$V_i = 50\text{mV}$ , $-3\text{dB}$	50	–	–	kHz
Low Level Cut-Off Frequency	$f_{CL}$	$V_i = 50\text{mV}$ , $-3\text{dB}$	–	–	30	Hz
Power Bandwidth	PBW	THD = 1%, $\pm 3\text{dB}$	30 to 30k			Hz
Output Noise Voltage	$V_{NO}$	$R_g = 2.2k\Omega$	–	–	1.2	mV

**Pin Connection Diagram**  
(Front View)

