

NTE1667 Integrated Circuit 2 Channel Amp, 2.3W/Ch (4.7W BTL)

Features:

- Has Two Channels that can be used for Either Stereo or Bridge Amplifier
- High Outputs:
 2 Channel (2.3W/Ch @ $V_{CC} = 9V$, $R_L = 4\Omega$)
 Bridge Amp (4.7W @ $V_{CC} = 9V$, $R_L = 8\Omega$)
- Voltage Gain is Variable by Externally Connected Feedback Resistors:
 2 Channel ($R_{NF} = 27\Omega$, $VG = 50dB$)
 Bridge Amp ($R_{NF} = 51\Omega$, $VG = 51dB$)
- Switching Distortions in Higher Frequencies have been Held Low
- The Built-In Muting Circuit Keeps Noise caused by Turning Power ON and OFF at Low Levels
- The Built-In Ripple Filter Provides Good Ripple Rejection Factors
- Excels in Channel Separation

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

Maximum Power Supply Voltage, V_{CCmax}	
With Signals	11V
With No Signal	15V
Allowable Power Dissipation, P_{Dmax}	4W
Operating Ambient Temperature Range, T_{opr}	-20° to $+75^\circ C$
Storage Ambient Temperature Range, T_{stg}	-55° to $+150^\circ C$

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

Recommended Power Supply Voltage, V_{CC}	9V
Load Resistance, R_L	
2 Channel	4 to 8Ω
Bridge Amp	8Ω

Electrical Characteristics: ($T_A = +25^{\circ}\text{C}$, $V_{CC} = 9\text{V}$, $f = 1\text{kHz}$, $R_g = 600\Omega$ unless otherwise specified)

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Quiescent Current	I_{CCO}	2 Channel, $R_L = 4\Omega$	6V	–	35	55	mA
			7.5V	–	40	–	mA
Voltage Gain 2 Channel	VG	Closed Loop, $R_{NF} = 27\Omega$, $V_{IN} = -51\text{dBm}$	$R_L = 4\Omega$	48	50	52	dB
Bridge Amp			$R_L = 8\Omega$	49	51	53	dB
Voltage Gain Imbalance	ΔVG	2 Channel, $R_L = 4\Omega$		–	–	2	dB
Power Output 2 Channel	P_O	THD = 10%	$R_L = 4\Omega$	1.7	2.3	–	W
			$R_L = 8\Omega$	–	1.3	–	W
				–	4.7	–	W
Total Harmonic Distortion	THD	2 Channel, $P_O = 250\text{mW}$, $R_L = 4\Omega$		–	0.5	2.0	%
Input Resistance	r_i	$R_L = 4\Omega$		21	30	–	k Ω
Output Noise Voltage	V_{NO}	2 Channel, $R_L = 4\Omega$	$R_g = 0$	–	0.5	1.3	mV
			$R_g = 10\text{k}\Omega$	–	0.8	2.5	mV
Ripple Rejection	R_r	2 Channel, $R_g = 0$, $V_R = 150\text{mV}$, $R_L = 4\Omega$		–	46	–	dB
Channel Separation	CH sep	2 Channel, $R_g = 10\text{k}\Omega$, $v_o = 0\text{dBm}$, $R_L = 4\Omega$		40	55	–	dB

Pin Connection Diagram

