

**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°C
Storage Ambient Temperature Range, $T_{stg}$	-55° to +150°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 Bridge Amp	VG	Closed Loop, $R_{NF} = 27\Omega$ , $V_{IN} = -51\text{dBm}$	$R_L = 4\Omega$	48	50	52	dB
			$R_L = 8\Omega$	49	51	53	dB
Voltage Gain Imbalance	$\Delta\text{VG}$	2 Channel, $R_L = 4\Omega$	-	-	2	dB	
Power Output 2 Channel Bridge Amp	$P_O$	THD = 10%	$R_L = 4\Omega$	1.7	2.3	-	W
			$R_L = 8\Omega$	-	1.3	-	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 $\Omega$	
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**

