



# TDA2002, TDA2002A

## MAXIMUM RATINGS ( $T_A = +25^\circ\text{C}$ )

Rating	Value	Unit
Peak Supply Voltage		V
TDA2002 (Transients of 50 ms or less)	40	
TDA2002/2002A (Steady State)	28	
Operating Power Supply Voltage	18	V
Peak Output Current (Nonrepetitive)	4.5	A
(Repetitive)	3.5	
Junction Temperature	150	$^\circ\text{C}$
Storage Temperature Range	-65 to +150	$^\circ\text{C}$
Operating Temperature Range	-40 to +85	$^\circ\text{C}$

## ELECTRICAL CHARACTERISTICS ( $V_{CC} = 14.4\text{ Vdc}$ , $R_L = 4.0\ \Omega$ , $f = 1.0\text{ kHz}$ , $T_A = 25^\circ\text{C}$ unless otherwise noted) \*

Characteristic	Symbol	Min	Typ	Max	Unit
Quiescent Drain Current ( $V_{in} = 0$ )	$I_D$	—	—	80	mA
Quiescent Output Voltage ( $V_{in} = 0$ )	$V_O$	6.4	7.2	8.0	V
Power Output — 10% Distortion ( $V_{CC} = 14.4\text{ V}$ , $R_L = 4.0\ \Omega$ ) ( $V_{CC} = 14.4\text{ V}$ , $R_L = 2.0\ \Omega$ ) ( $V_{CC} = 16\text{ V}$ , $R_L = 4.0\ \Omega$ ) ( $V_{CC} = 16\text{ V}$ , $R_L = 2.0\ \Omega$ )	$P_o$	4.8 7.0 — —	5.2 8.0 6.5 10	— — — —	W
Input Resistance ( $P_{in} = 1$ )	$r_i$	70	150	—	$k\Omega$
Equivalent Input Noise Voltage ( $R_S = 0$ , Bandpass = 20 Hz to 15 kHz)	$e_n$	—	4	—	$\mu\text{V}$
Equivalent Input Noise Current ( $R_S = 0$ , Bandpass = 20 Hz to 15 kHz)	$i_n$	—	0.1	—	nA
Power Supply Rejection Ratio ( $f_{\text{ripple}} = 100\text{ Hz}$ )	PSRR	30	35	—	dB

\* See Test Circuit — Figure 1 .

FIGURE 1 — APPLICATION AND TEST CIRCUIT

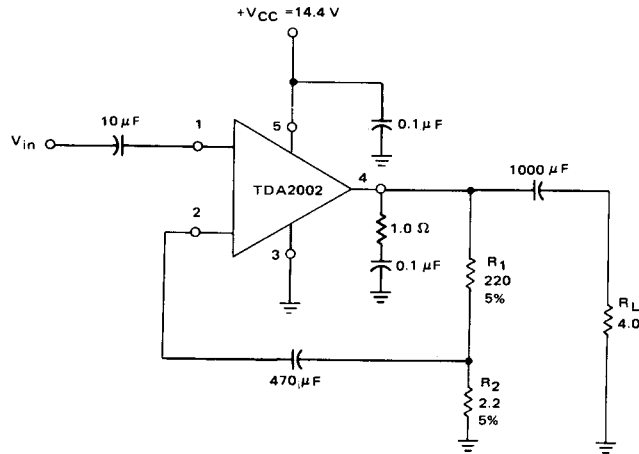
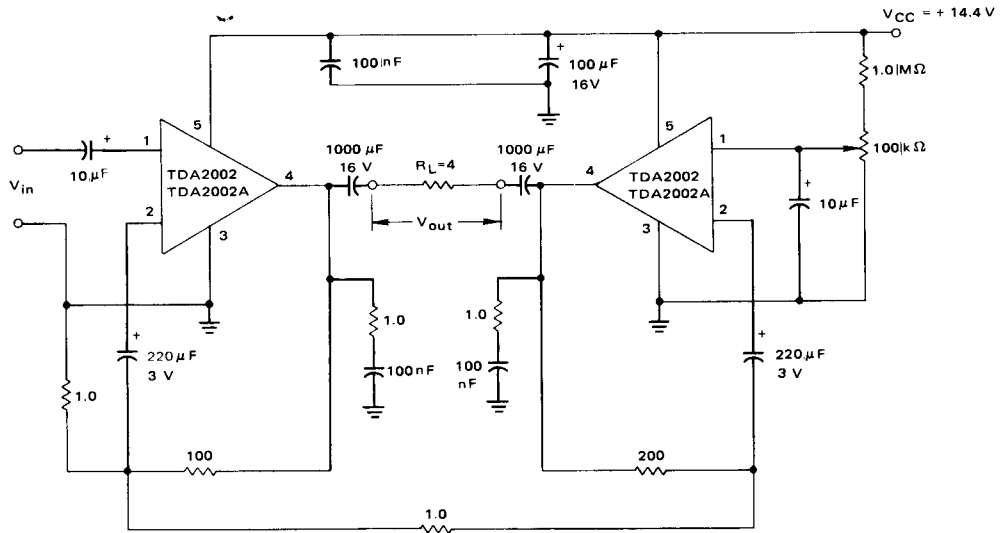


FIGURE 2 – 15 WATT APPLICATION CIRCUIT  
(Typical Bridge Configuration)



Note: The TDA2002, A is not compensated for operation with a closed loop gain of 20 or less. Operation below a gain of 20 may cause stability problems.