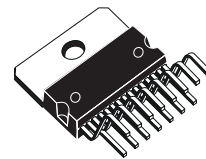




## 8W+8W+15W TRIPLE AMPLIFIER

- 8+8W (RL = 8Ω) + 15W (RL = 4Ω)  
OUTPUT POWER @THD = 10%, Vcc = 25V
- INDEPENDENT MUTE FOR CENTER CHANNEL AND MAIN CHANNELS
- NO TURN-ON TURN-OFF POP NOISE
- NO BOUCHEROT CELL
- SINGLE SUPPLY RANGING UP TO 35V
- SHORT CIRCUIT PROTECTION
- THERMAL OVERLOAD PROTECTION
- INTERNALLY FIXED GAIN
- SOFT CLIPPING
- MULTIWATT 15 PACKAGE

### MULTIPOWER BI50II TECHNOLOGY



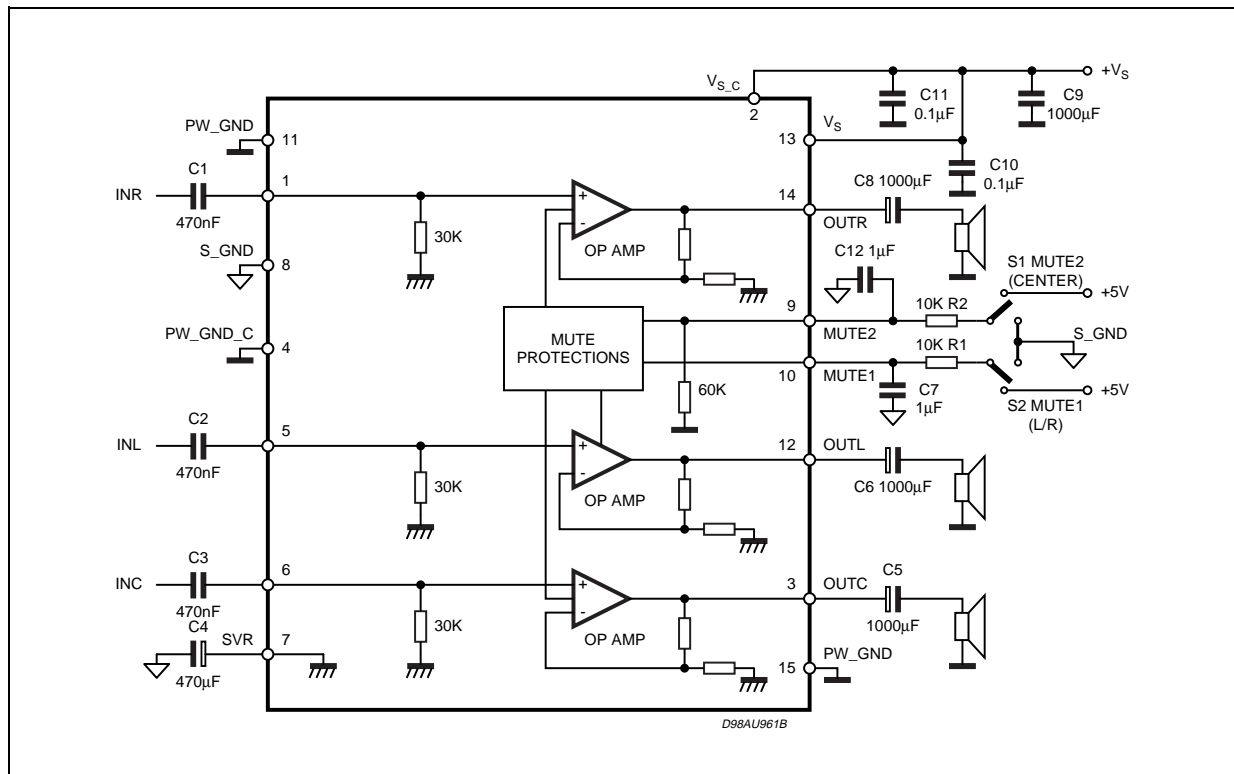
**Multiwatt15**  
**ORDERING NUMBER: TDA7497S**

### DESCRIPTION

The TDA7497S is a triple 8+8+15W class AB power amplifier assembled in the @ Multiwatt 15 package, specially designed for high quality sound, TV applications.

Features of the TDA7497S include mute functions, independently controller for main and center channels.

### BLOCK DIAGRAM



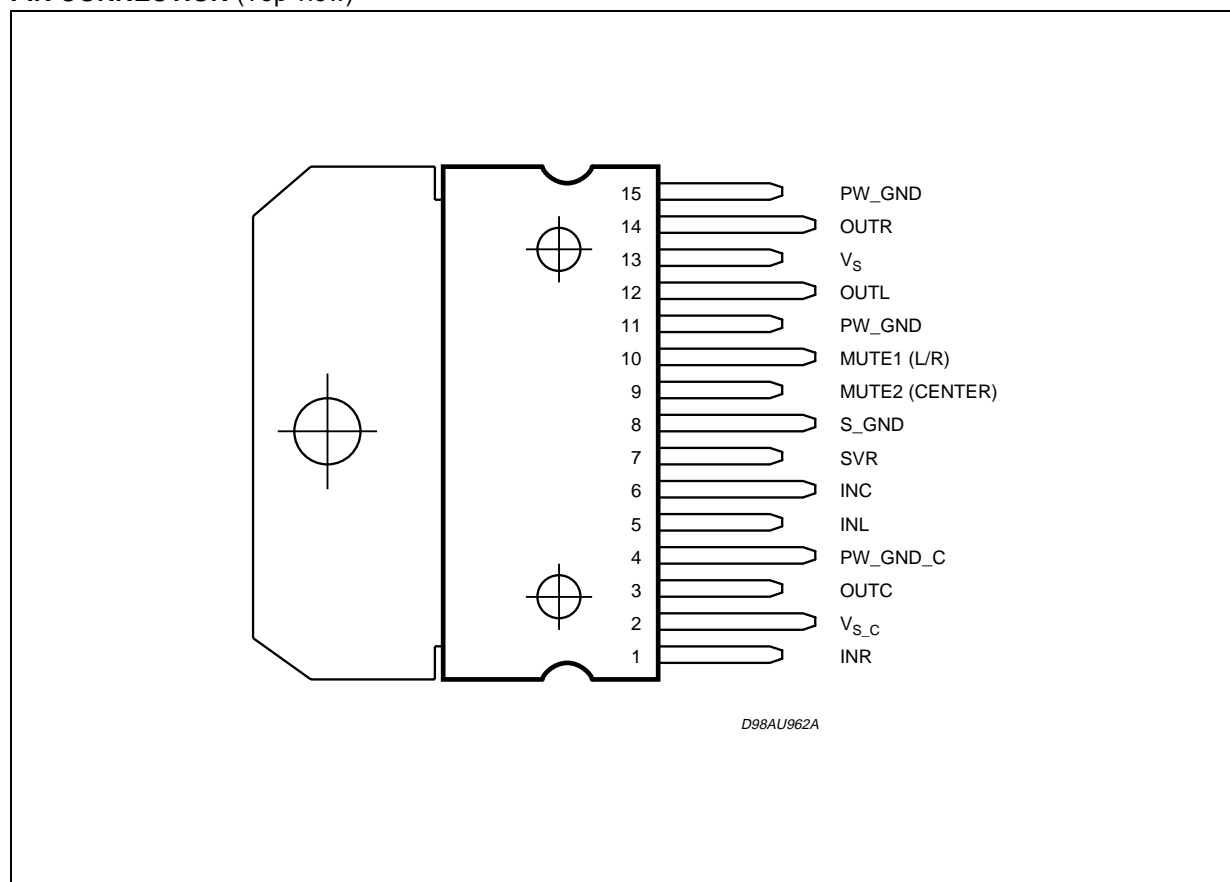
## TDA7497S

### ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
$V_S$	DC Supply Voltage	35	V
$P_{tot}$	Total Power Dissipation ( $T_{amb} = 70^\circ\text{C}$ )	20	W
$T_{amb}$	Ambient Operating Temperature (1)	0 to 70	$^\circ\text{C}$
$T_{stg}, T_j$	Storage and Junction Temperature	-40 to 150	$^\circ\text{C}$

(1) Operation between -20 to 85  $^\circ\text{C}$  guaranteed by correlation with 0 to 70 $^\circ\text{C}$ .

### PIN CONNECTION (Top view)



### THERMAL DATA

Symbol	Parameter	Value	Unit
$R_{th\ j-case}$	Thermal Resistance Junction-case	Typ.=1.3 max = 1.9	$^\circ\text{C}/\text{W}$
$R_{th\ j-amb}$	Thermal Resistance Junction-ambient	max = 35	$^\circ\text{C}/\text{W}$

**ELECTRICAL CHARACTERISTICS** (Refer to the test circuit  $V_S = 25V$ ;  $R_G = 50\Omega$ ,  $T_{amb} = 25^\circ C$ )

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
$V_S$	Supply Voltage Range		11		30	V
$I_q$	Total Quiescent Current			60	100	mA
$V_O$	Quiescent Output Voltage		11.5	12.5	13.5	V
$P_{O\_L/R}$	Output Power Left / Right Channels	THD = 10%; $R_L = 8\Omega$ ; THD = 1%; $R_L = 8\Omega$ ;	6 5	8 6		W W
$P_{O\_C}$	Output Power Center Channel	THD = 10%; $R_L = 4\Omega$ ; THD = 1%; $R_L = 4\Omega$	12 10	15 12		W W
THD	Total Harmonic Distortion	PO = 1W; f = 1KHz;			0.4	%
$I_{peak\ L/R}$	Output Peak Current	(internally limited)		2.0		A
$I_{peak\ C}$	Output Peak Current Central Channel	(internally limited)		2.5		A
GV	Closed Loop Gain		28.5	29.5	30.5	dB
$\Delta GV$	L/R Voltage Gain Matching		-1		1	dB
BW				0.6		MHz
$e_N$	Total Output Noise	f = 20Hz to 22KHz		60	150	$\mu V$
SR	Slew Rate		5	8		V/ $\mu s$
$R_i$	Input Resistance		22.5	30		K $\Omega$
SVR	Supply Voltage Rejection	f = 1kHz CSVR = 470mF; VRIP = 1Vrms	50	60		dB
$T_M$	Thermal Muting			150		$^\circ C$
$T_s$	Thermal Shut-down			160		$^\circ C$
<b>MUTE &amp; INPUT SELECTION FUNCTIONS</b>						
$V_{MUTE1}$	Mute 1 ON threshold (L/R)		3.5			V
	Mute 1 OFF threshold (L/R)				1.5	V
$V_{MUTE2}$	Mute 2 ON Threshold (center)		3.5			V
	Mute 2 OFF Threshold (center)				1.5	V
$A_{MUTE}$	Mute Attenuation		50	65		dB
$I_{muteBIAS}$	Mute bias current Mute1/Mute2	Mute		1	5	mA
		Play		0.2	2	mA

Figure 1. PC Boar and Component Layout

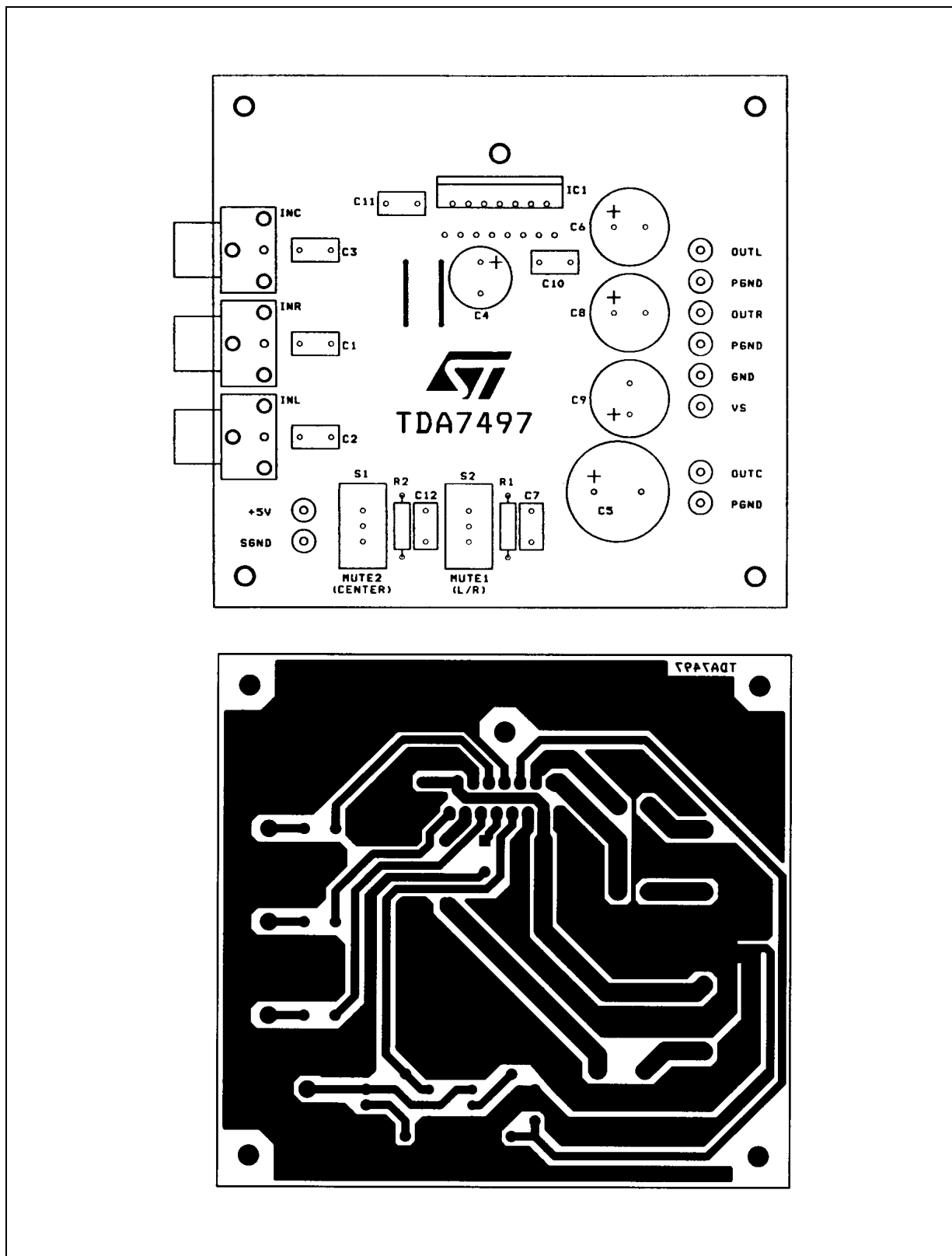


Figure 2. Output Power vs Supply Voltage

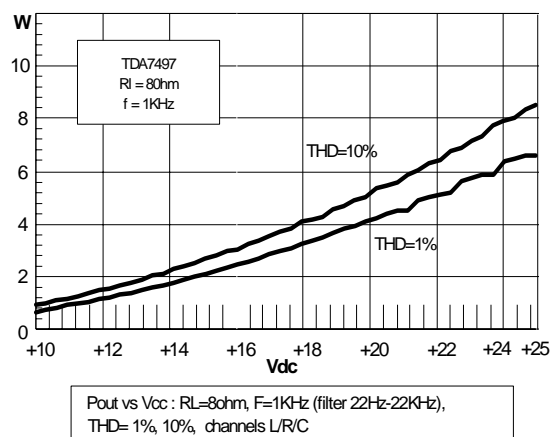


Figure 4. THD+N vs Output Power

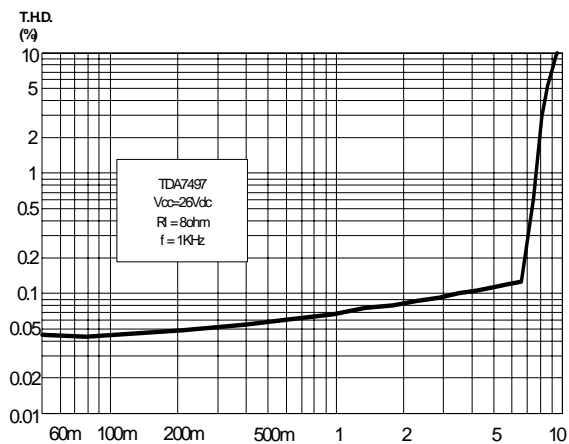


Figure 3. Frequency Response

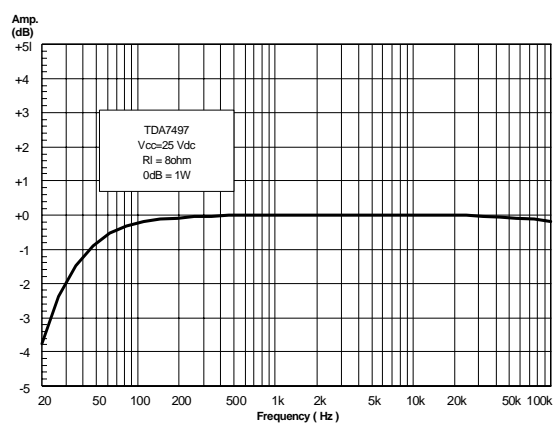
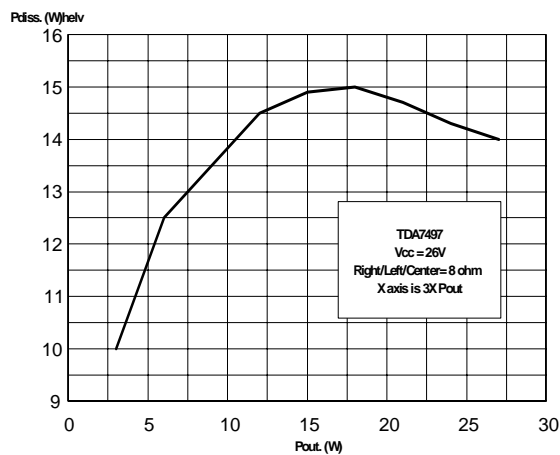


Figure 5. P<sub>diss</sub> vs Output Power





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