



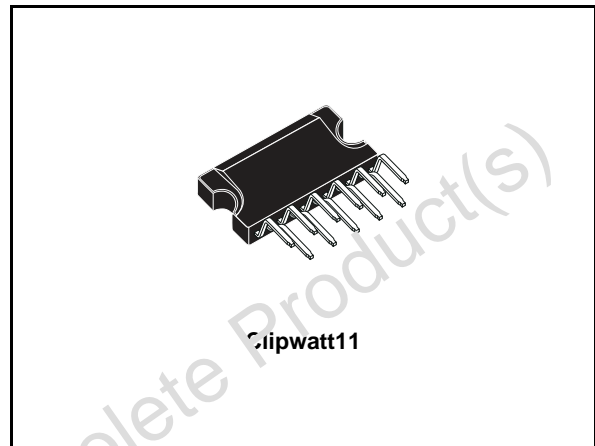
# TDA7253

## 8W AMPLIFIER WITH MUTING

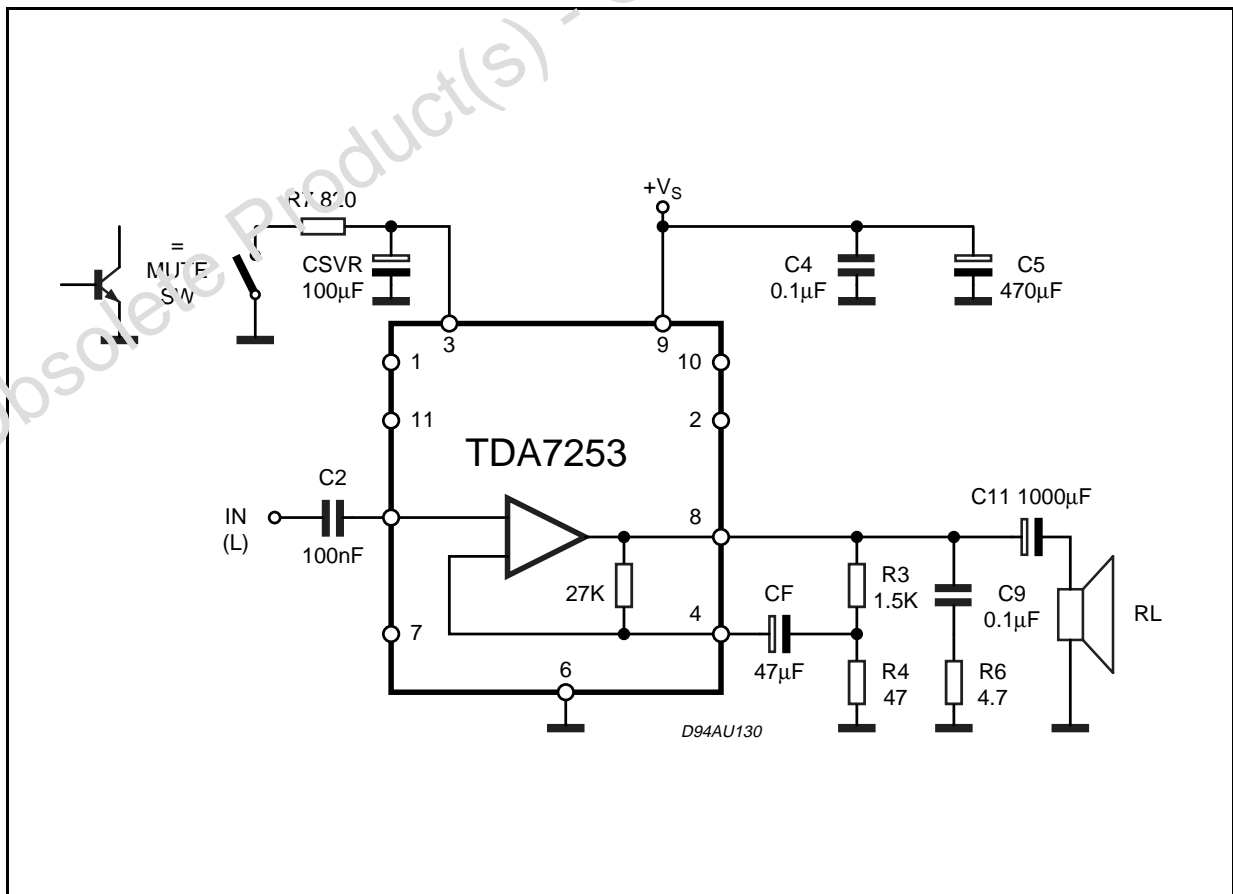
- WIDE SUPPLY VOLTAGE RANGE
- 8W @  $V_S=26V$ ,  $R_L = 8\Omega$ , THD=10%
- MUTE FACILITY (POP FREE) WITH LOW CONSUMPTION
- AC SHORT CIRCUIT PROTECTION
- THERMAL OVERLOAD PROTECTION (150°C)

### DESCRIPTION

The TDA7253 is class AB audio power amplifier assembled in the new Clipwatt package.



### APPLICATION CIRCUIT



# TDA7253

## ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
$V_S$	Supply Voltage	35	V
$I_o$	Output Peak Current (repetitive $f > 20\text{Hz}$ )	2.5	A
$I_o$	Output Peak Current (non repetitive, $t = 100\mu\text{s}$ )	3.5	A
$P_{tot}$	Total Power Dissipation ( $T_{case} = 70^\circ\text{C}$ )	25	W
$T_{op}$	Operating Temperature Range	0 to 70	$^\circ\text{C}$
$T_{stg,Tj}$	Storage & Junction Temperature	-40 to 150	$^\circ\text{C}$

## PIN CONNECTION (Top view)

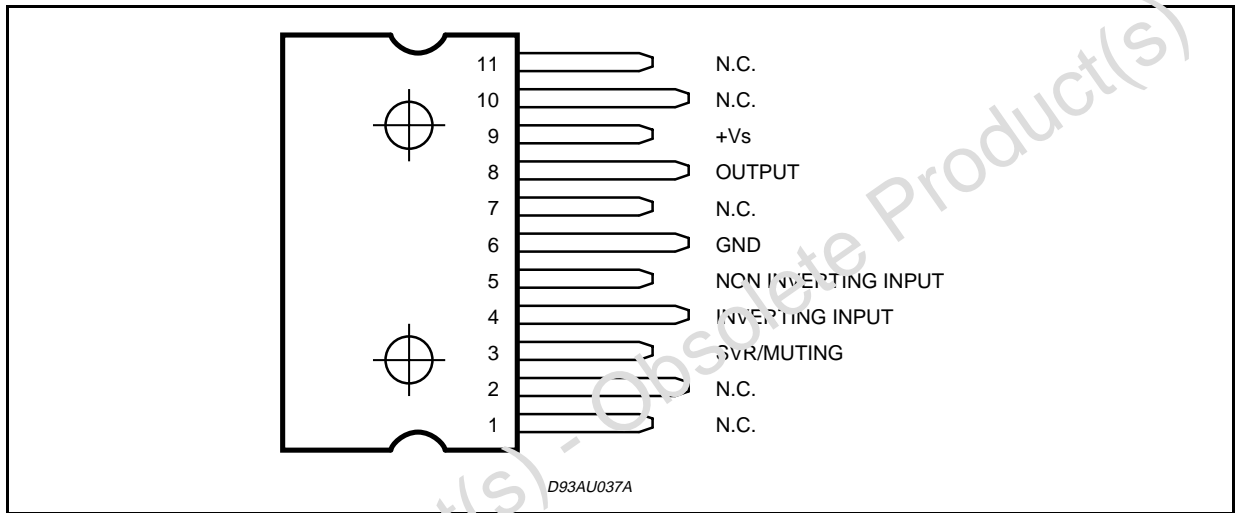
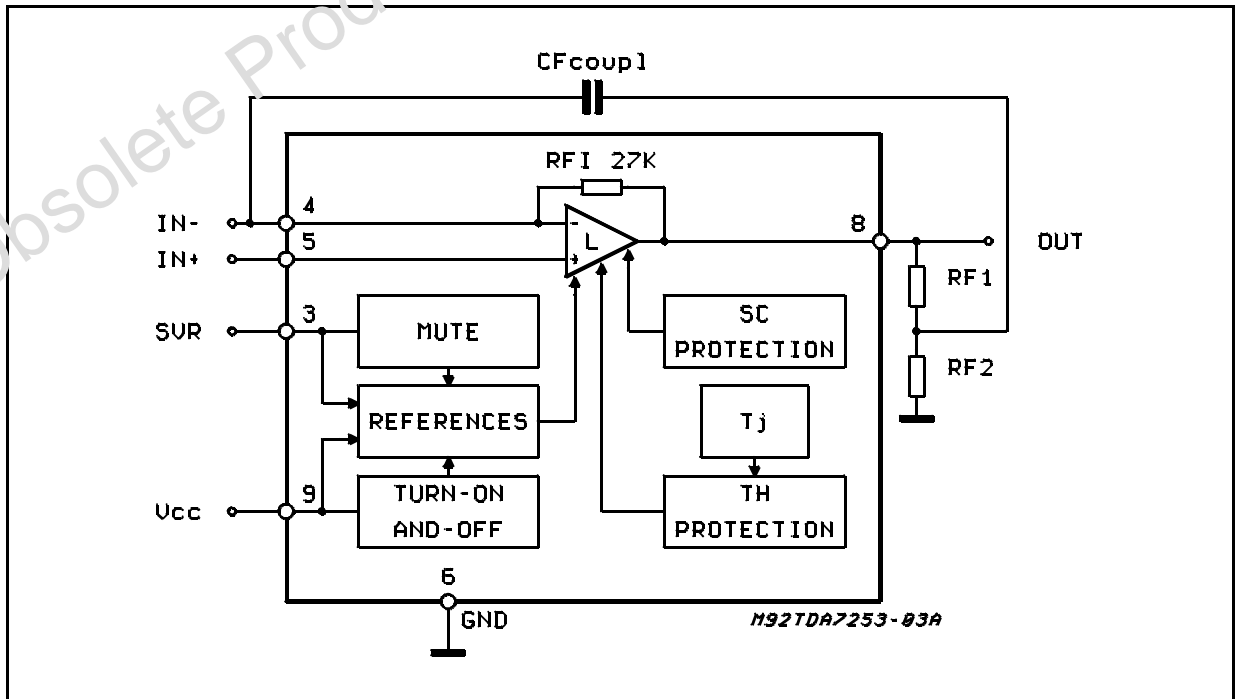


Figure 1: Application Circuit



**THERMAL DATA**

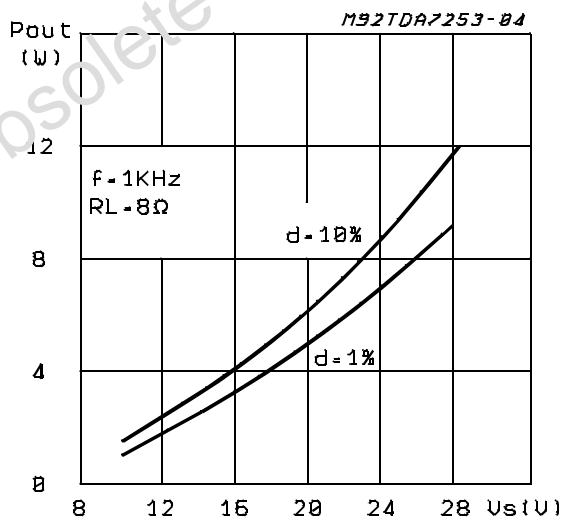
Symbol	Parameter	Value	Unit
R <sub>th j-case</sub>	Thermal resistance junction to case	Max 3	°C/W

**ELECTRICAL CHARACTERISTICS** (Refer to the test and application circuit, V<sub>S</sub> = 26V; R<sub>L</sub> = 8Ω; G<sub>v</sub> = 30dB; f = 1KHz; T<sub>amb</sub> = 25°C unless otherwise specified.)

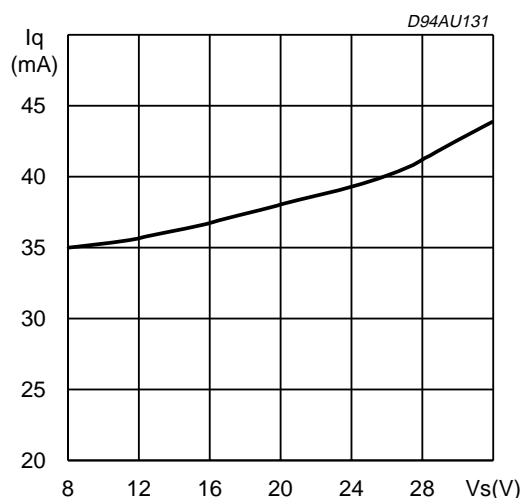
Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
V <sub>S</sub>	Supply Voltage		10		32	V
V <sub>O</sub>	Quiescent Output Voltage			12.5		V
I <sub>q</sub>	Total Quiescent Current			40		mA
P <sub>O</sub>	Output Power	d = 10% d = 1%	8	10 8		V/ W
d	Total Harmonic Distortion	P <sub>O</sub> = 1W		0.03		%
R <sub>I</sub>	Input Resistance		100	100		KΩ
f <sub>L</sub>	Low Frequency Roll-off (-3dB)			40		Hz
f <sub>H</sub>	High Frequency Roll-off (-3dB)			80		KHz
e <sub>N</sub>	Total Input Noise Voltage	A Curve; R <sub>S</sub> = 10KΩ f = 22Hz to 22KHz; R <sub>L</sub> = 10KΩ		2 2.5	10	mV μV
SVR	Supply Voltage Rejection	R <sub>S</sub> = 10KΩ; f = 100Hz; V <sub>i</sub> = 0.5V		60		dB
V <sub>T MUTE</sub>	Mute Threshold			0.8		V
V <sub>T PLAY</sub>	Play Threshold		5			V
A <sub>M</sub>	Mute Attenuation		80	100		dB
I <sub>q MUTE</sub>	Quiescent Current Mute			7	10	mA

Note: to avoid pop-on noise  $\frac{C_F}{C_{SVR}} \leq 1$

**Figure 1: Output Power vs. Supply Voltage**



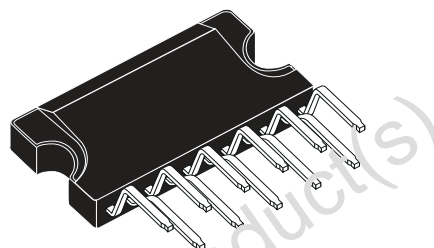
**Figure 2: Quiescent Current vs. Supply Voltage**



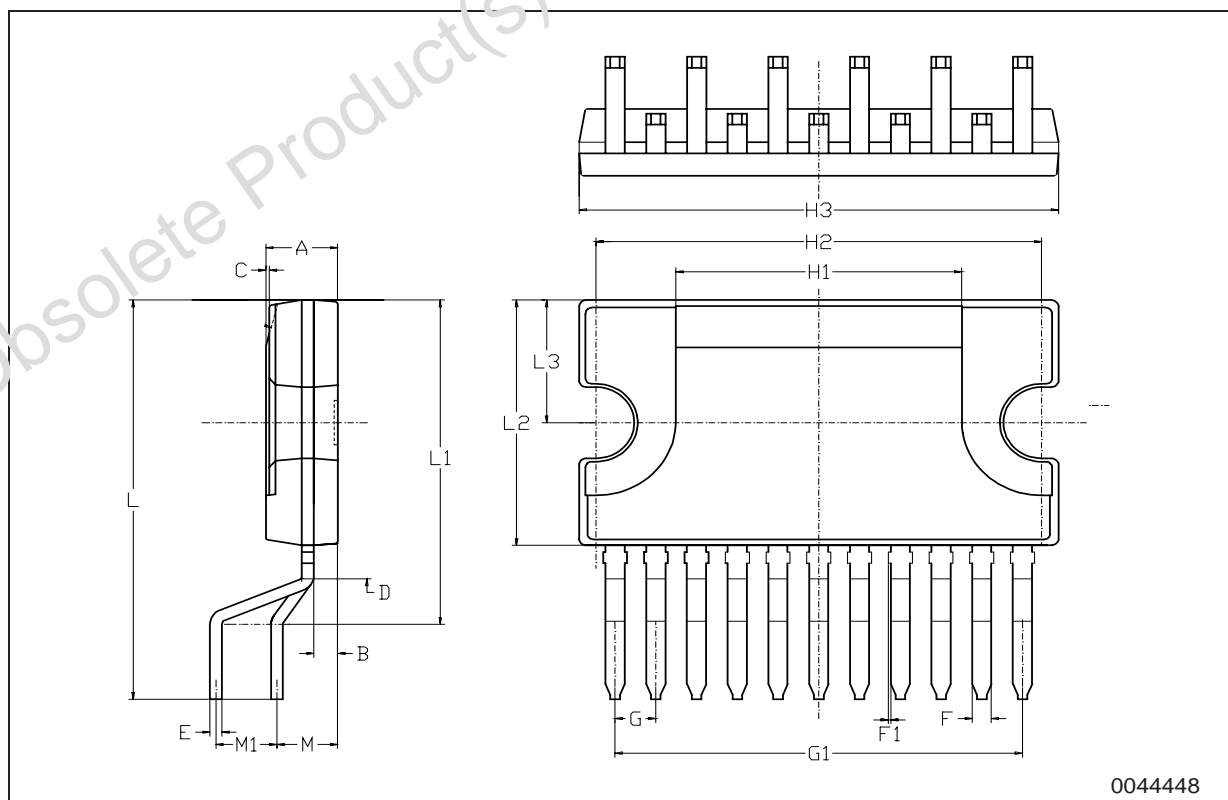
DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A			3.2			0.126
B			1.05			0.041
C		0.15			0.006	
D		1.5			0.059	
E	0.49		0.55	0.019		0.002
F	0.77	0.8	0.88	0.030	0.031	0.035
F1			0.15			0.006
G	1.57	1.7	1.83	0.062	0.067	0.072
G1	16.87	17	17.13	0.664	0.669	0.674
H1		12			0.480	
H2		18.6			0.732	
H3	19.85			0.781		
L		17.9			0.700	
L1		14.55			0.580	
L2	10.7	11	11.2	0.421	0.433	0.441
L3		5.5			0.217	
M		2.54			0.100	
M1		2.54			0.100	

**OUTLINE AND MECHANICAL DATA**

Weight: 1.80gr



**Clipwatt1**



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