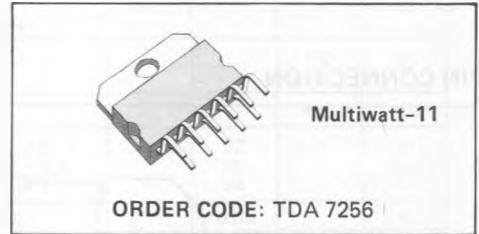


22W BRIDGE FULLY PROTECTED CAR RADIO AMPLIFIER

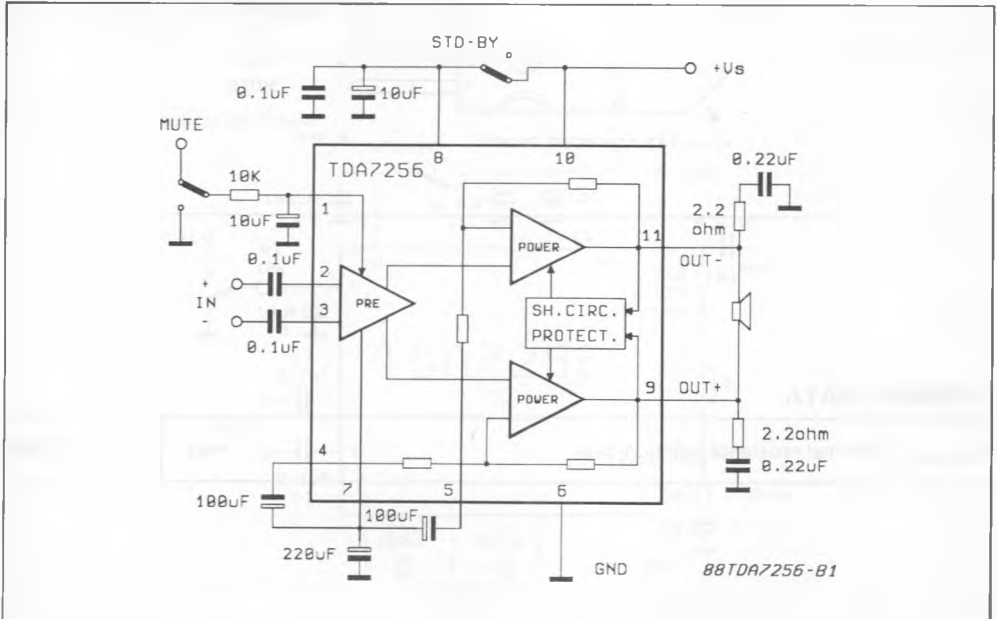
ADVANCE DATA

- NO AUDIBLE POP DURING MUTE AND STANDBY OPERATIONS
- MUTING TTL COMPATIBLE
- VERY LOW CONSUMPTION STANDBY
- PROGRAMMABLE TURN ON DELAY
- DIFFERENTIAL INPUT
- SHORT CIRCUIT PROTECTIONS:
 RL SHORT - OUT TO GROUND - OUT TO V_s
- OTHER PROTECTIONS:
 - Load dump voltage surge
 - Loudspeaker DC current
 - Very inductive load
 - Overrating temperature
 - Open ground

The TDA7256 is a class B dual fully protected bridge power amplifier, designed for car radio applications. A high current capability allows to drive low impedance loads (up to 2Ω).



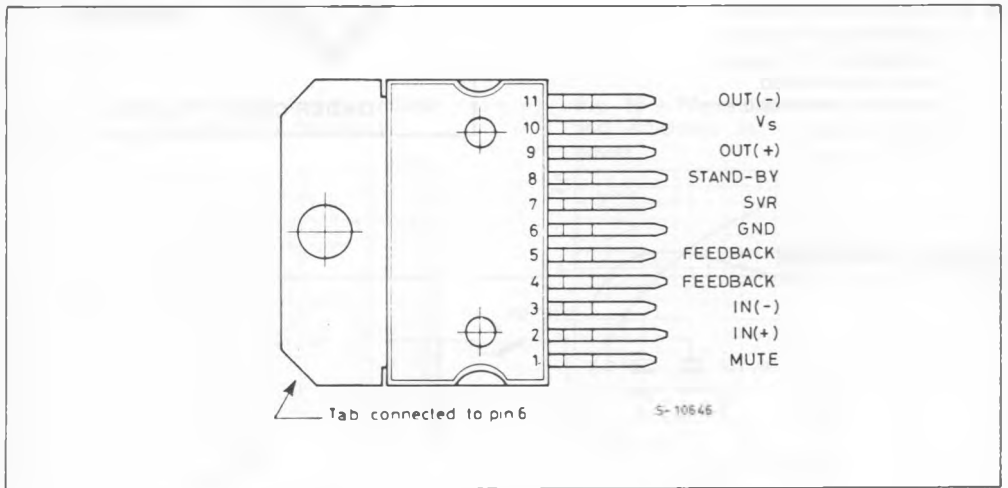
BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

V_s	Operating supply voltage	18	V
V_s	DC supply voltage	28	V
V_s	Peak supply voltage (for 50 ms)	40	V
I_o	Output peak current (no repetitive $t = 0.1$ ms)	Internally limited	
	Output peak current repetitive $f > 10$ Hz	5.5	A
P_{tot}	Power dissipation at $T_{case} = 70^\circ\text{C}$	36	W
T_{st}, T_J	Storage and junction temperature	-40 to 150	$^\circ\text{C}$

PIN CONNECTION



THERMAL DATA

$R_{th\ j-case}$	Thermal resistance junction-case	max	2.2	$^\circ\text{C/W}$
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ELECTRICAL CHARACTERISTICS ($V_s = 14.4V$, $R_L = 4\Omega$, $f = 1\text{ KHz}$, $T_{amb} = 25^\circ\text{C}$) (unless otherwise specified)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_s	Supply voltage	8		18	V
I_o	Total quiescent drain current		80		mA
R_i	Input resistance		70		$K\Omega$

MUTING FUNCTION

Muting attenuation	$V_{ref} = 1V_{rms}$ $f = 100\text{ Hz to }10\text{ KHz}$	60			dB
Muting-on threshold voltage	Pin 1	2.4			V
Muting-off threshold voltage	Pin 1			0.8	V
Stand-by attenuation	$V_{ref} = 1V_{rms}$ $f = 100\text{ Hz to }10\text{ KHz}$	60			dB
Stand-by quiescent drain current				100	μA
V_{Os}	Output offset voltage			150	mV
P_o	Output power	$d = 10\%$ $R_L = 4\ \Omega$ $R_L = 3.2\ \Omega$ $R_L = 2\ \Omega$	22 26 28		W W W
THD	Distortion	$P_o = 50\text{ mW to }13\text{W}$	0.05		%
G_v	Voltage gain (CL)		36		dB
e_N	Total input noise voltage	$R_o = 10\text{ K}\Omega$ $B = 22\text{ Hz to }22\text{ KHz}$	3	10	μV
SVR	Supply voltage rejection (closed loop)	$R_o = 10\text{ K}\Omega$ $f = 300\text{ Hz}$	45	58	dB
T_{SD}	Thermal shut down junction temperature		145		$^\circ\text{C}$

Fig. 1 - Test and application circuit

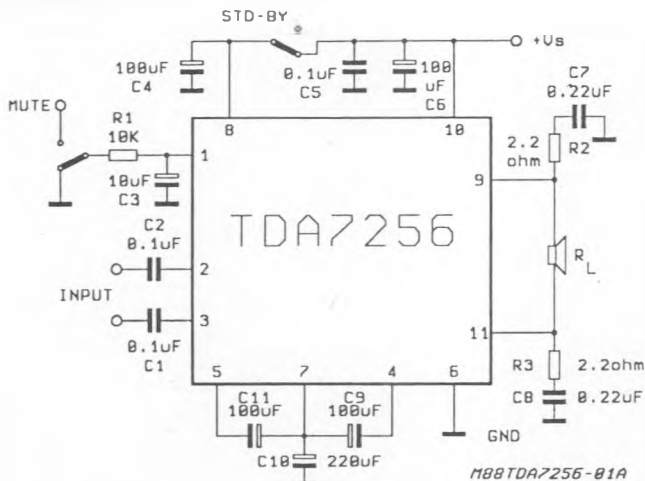


Fig. 2 - Output power vs. supply voltage

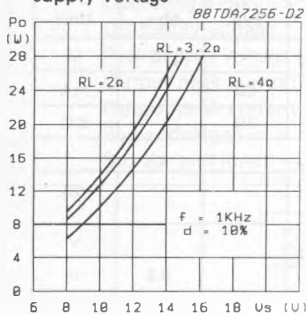


Fig. 3 - Distortion vs. output power

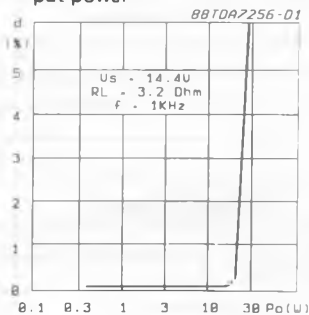


Fig. 4 - Distortion vs. frequency

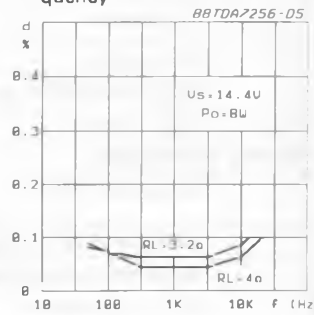


Fig. 5 - Supply voltage rejection vs. frequency

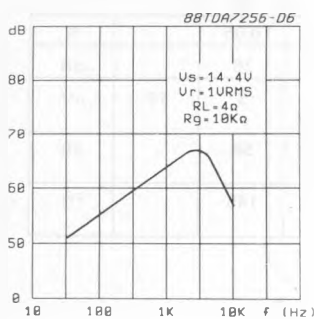


Fig. 6 - Common mode rejection vs. frequency

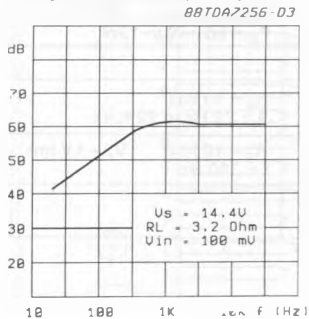


Fig. 7 - Quiescent current vs. supply voltage

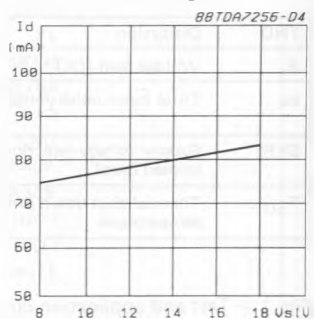


Fig. 8 - P.C. and layout of the fig. 1 (1:1 scale)

