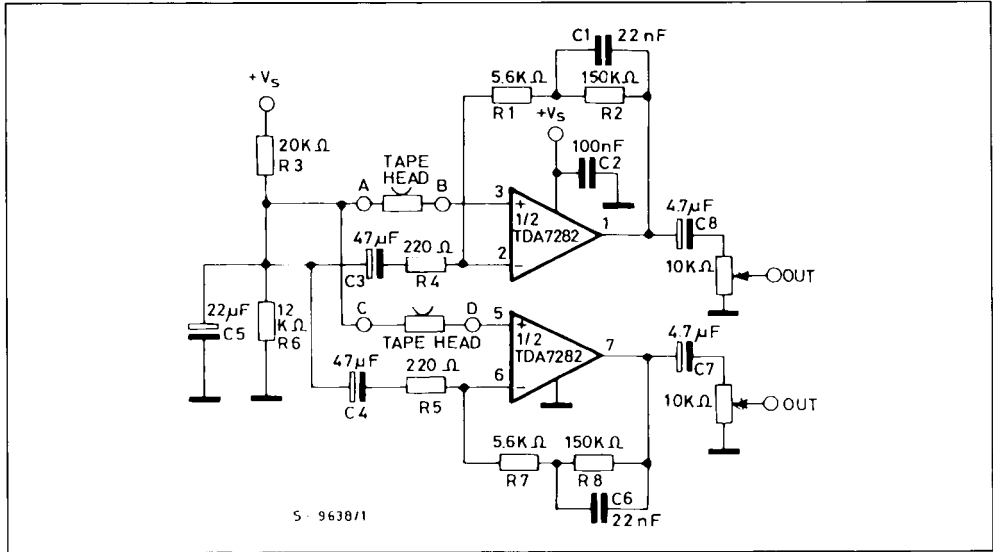
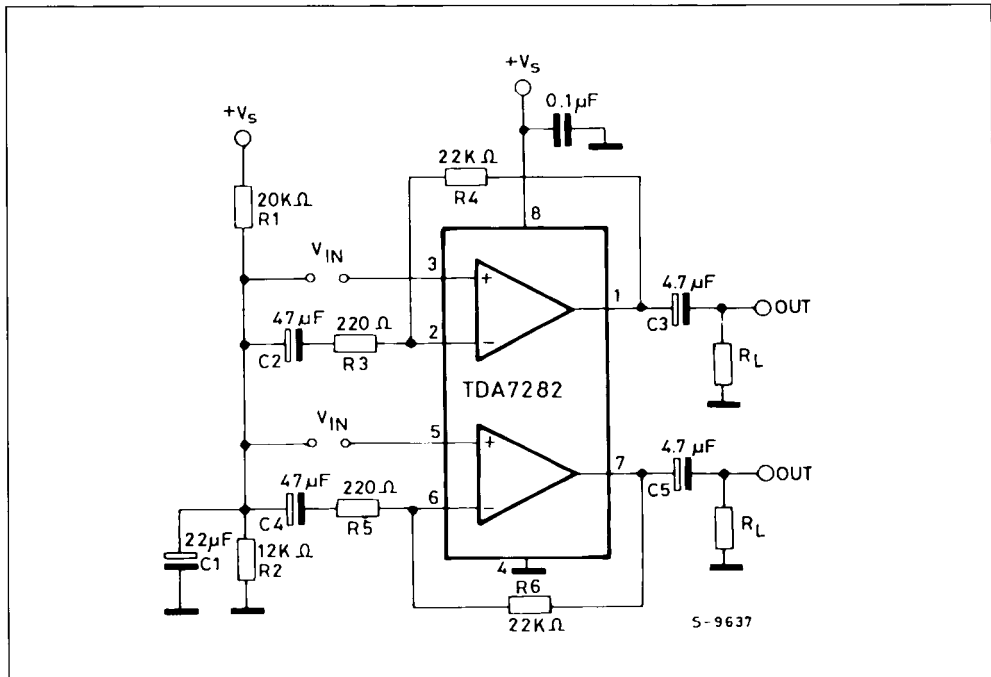


STEREO PREAMPLIFIER FOR CASSETTE PLAYERS



TEST CIRCUIT



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_s	Supply Voltage	10	V
T_{stg}, T_j	Storage and Junction Temperature	- 40 to 150	°C
P_{tot}	Total Power Dissipation at $T_{amb} = 70\text{ °C}$	400	mW

THERMAL DATA

$R_{th\ j-amb}$	Thermal Resistance Junction-ambient	Max	200	°C/W
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ELECTRICAL CHARACTERISTICS ($V_s = 3\text{ V}$, $T_{amb} = 25\text{ °C}$, $f = 1\text{ kHz}$, $G_v = 40\text{ dB}$, $R_L = 10\text{ k}\Omega$, $R_s = 600\ \Omega$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_s	Supply Voltage		1.8		9	V
I_d	Supply Current			1.5	3	mA
I_b	Input Bias Current			280	500	nA
I_{os}	Input Offset Current			20		nA
V_{os}	Input Offset Voltage			0.5		mV
$V_{o\ DC}$	Quiescent Voltage			1.1		V
V_o	Output Voltage	THD = 1 %	550	650		mV
THD	Total Harmonic Distortion f = 100 Hz f = 1 kHz f = 10 kHz	$V_o = 300\text{ mV}$		0.08 0.07 0.1	0.5	% % %
G_v	Open Loop Voltage Gain	f = 1 kHz	68	80		dB
G_v	Closed Loop Gain			40		dB
	Channel Balance			0.5		dB
e_N	Total Input Noise Voltage	$B_W = 22\text{ kHz to }22\text{ kHz}$		1.5		μV
C_S	Channel Separation	f = 1 kHz $V_o = 30\text{ mV}$		65		dB
SVR	Supply Voltage Rejection	f = 100 Hz	36	45		dB
R_{IN}	Input Resistance			100		k Ω
R_o	Output Resistance			15		Ω

APPLICATION INFORMATION

Figure 1 : Stereo Preamplifier for Cassette Players.

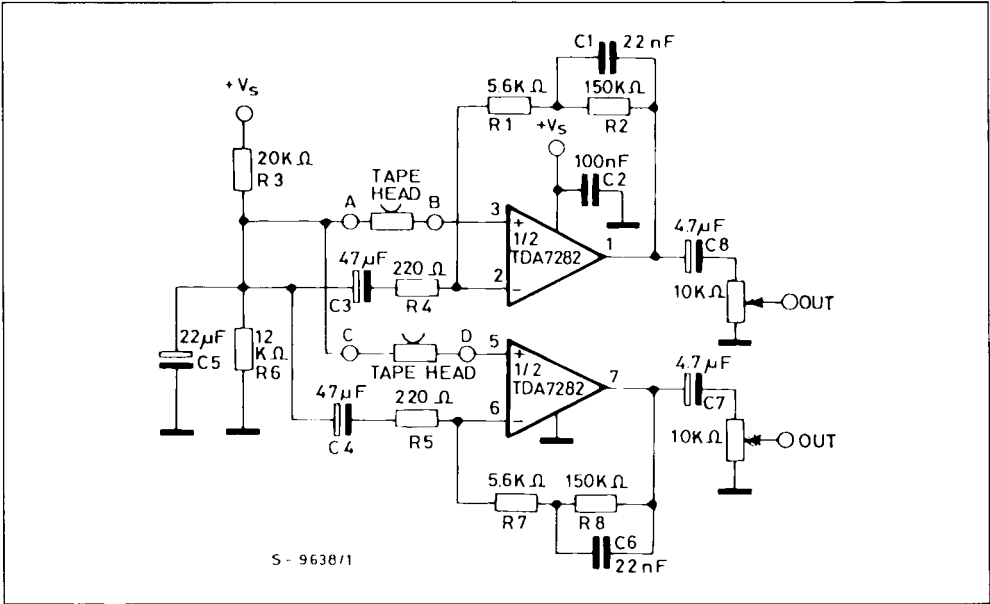


Figure 2 : P. C. and Components layout of the Circuit of Fig. 1 (1 : 1 scale).

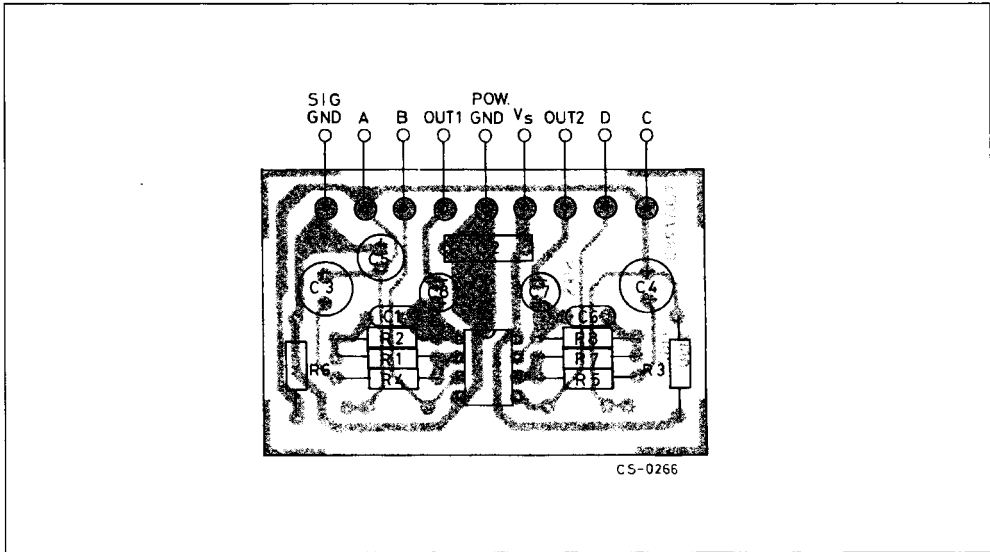


Figure 3 : Quiescent Current vs Supply voltage.

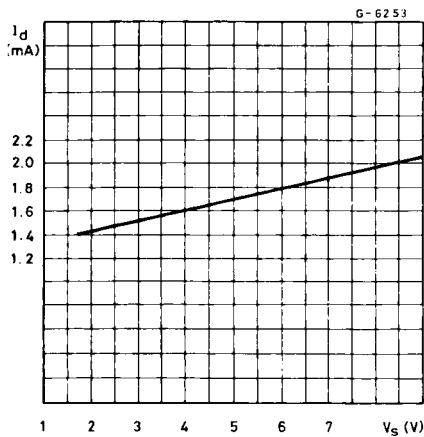


Figure 4 : DC Output Voltage vs. Supply Voltage.

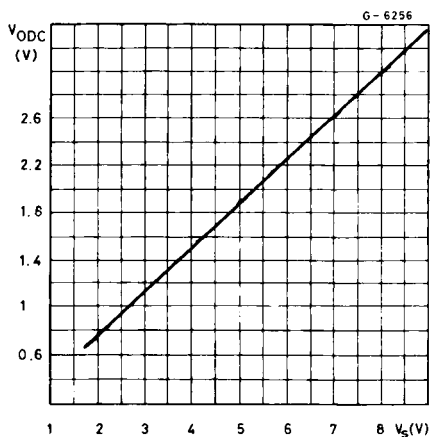


Figure 5 : Input bias Current vs Supply voltage.

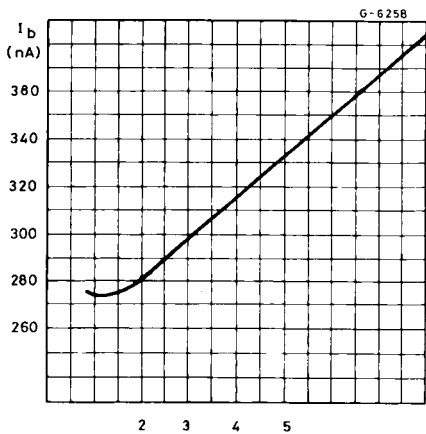


Figure 6 : Distortion Versus Output Level.

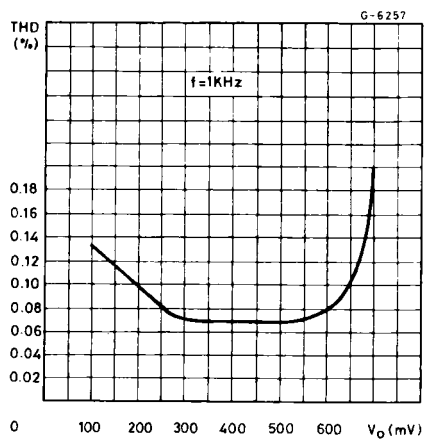


Figure 7 : Distortion vs Frequency.

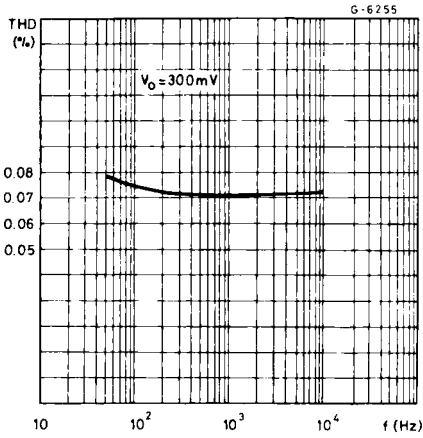


Figure 8 : NAB Response of Circuit of Fig. 1.

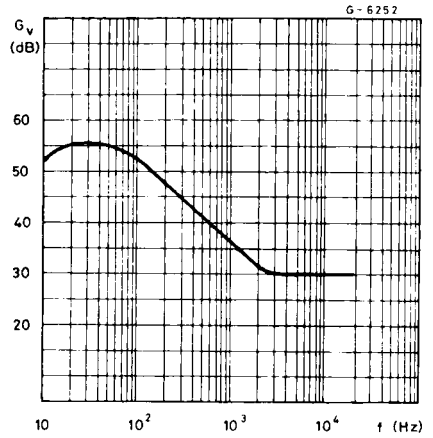


Figure 9 : Supply Voltage rejection vs. Frequency.

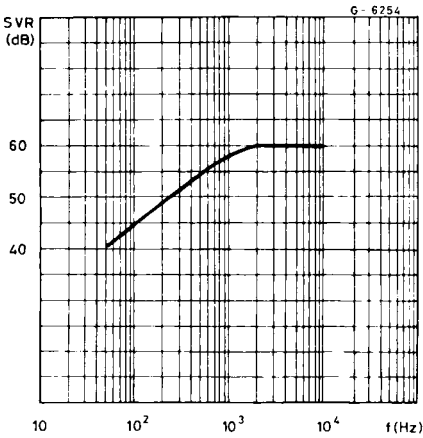


Figure 10 : Stereo Cassette Player with Motor Speed Control.

