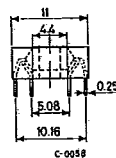
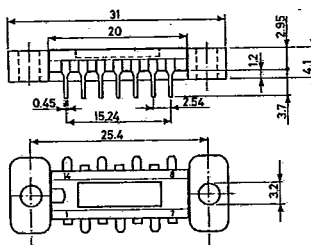
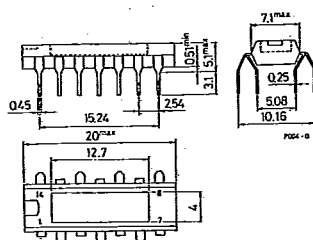
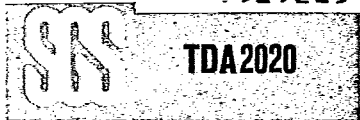


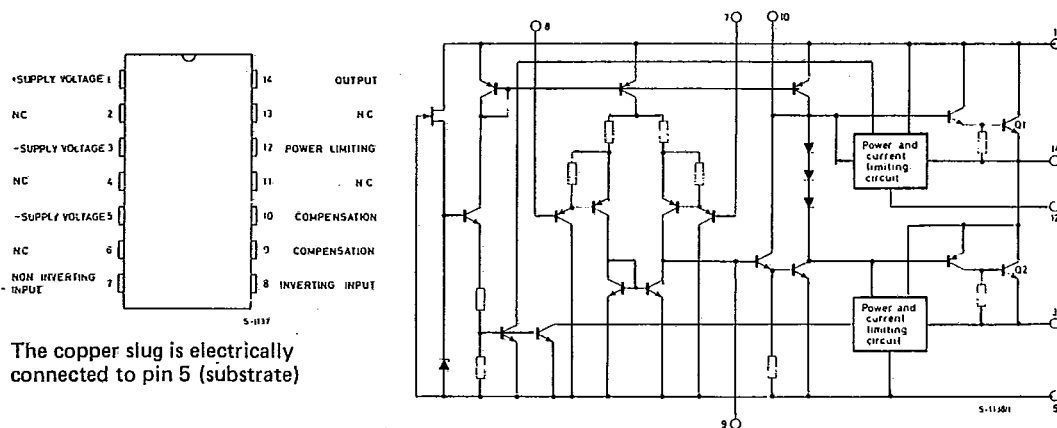


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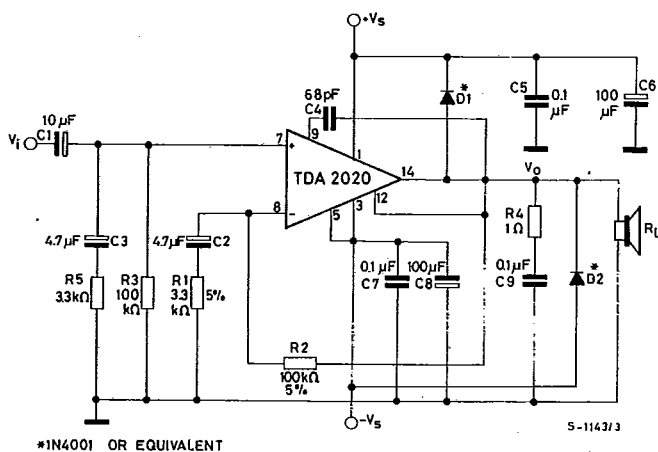




CONNECTION AND SCHEMATIC DIAGRAMS (top view)



TEST CIRCUIT



THERMAL DATA

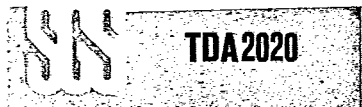
$R_{th J-case}$	Thermal resistance junction-case	max	3	$^{\circ}\text{C/W}$
1272	G-07	560		



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ELECTRICAL CHARACTERISTICS(Refer to the test circuit, $V_s = \pm 17V$, $T_{amb} = 25^\circ C$ unless otherwise specified)

Parameter	Test conditions	Min.	Typ.	Max.	Unit
V_s Supply voltage		± 5		± 22	V
I_d Quiescent drain current	$V_s = \pm 22 V$		60		mA
I_b Input bias current			0.15		μA
V_{os} Input offset voltage			5		mV
I_{os} Input offset current			0.05		μA
V_{os} Output offset voltage			10	100	mV
P_o Output power	$d = 1\%$ $G_v = 30 \text{ dB}$ $T_{case} \leq 70^\circ C$ $f = 40 \text{ to } 15\,000 \text{ Hz}$ $V_s = \pm 17V$ $R_L = 4 \Omega$ $V_s = \pm 18V$ $R_L = 4 \Omega$ $V_s = \pm 18V$ $R_L = 8 \Omega$	15	18.5 20 16.5		W W W
	$d = 10\%$ $G_v = 30 \text{ dB}$ $T_{case} \leq 70^\circ C$ $f = 1 \text{ kHz}$ $V_s = \pm 17V$ $R_L = 4 \Omega$ $V_s = \pm 18V$ $R_L = 8 \Omega$		24 20		W W
V_i Input sensitivity	$G_v = 30 \text{ dB}$ $f = 1 \text{ kHz}$ $P_o = 15 \text{ W}$ $V_s = \pm 17V$ $R_L = 4 \Omega$ $V_s = \pm 18V$ $R_L = 8 \Omega$		260 380		mV mV
B Frequency response (-3 dB)	$R_L = 4 \Omega$ $C_4 = 68 \text{ pF}$	10 to 160 000			Hz
d Distortion	$P_o = 150 \text{ mW to } 15W$ $R_L = 4 \Omega$ $G_v = 30 \text{ dB}$ $T_{case} \leq 70^\circ C$ $f = 1 \text{ kHz}$ $f = 40 \text{ to } 15\,000 \text{ Hz}$		0.2 0.3	1	% %
	$P_o = 150 \text{ mW to } 15W$ $V_s = \pm 18V$ $R_L = 8 \Omega$ $G_v = 30 \text{ dB}$ $T_{case} \leq 70^\circ C$ $f = 1 \text{ kHz}$ $f = 40 \text{ to } 15\,000 \text{ Hz}$		0.1 0.25		% %
R_i Input resistance (pin 7)			5		M Ω
G_v Voltage gain (open loop)	$R_L = 4 \Omega$ $f = 1 \text{ kHz}$		100		dB
G_v Voltage gain (closed loop)		29.5	30	30.5	dB



ELECTRICAL CHARACTERISTICS (continued)

Parameter	Test conditions	Min.	Typ.	Max.	Unit
e_N Input noise voltage	$R_L = 4 \Omega$		4		μV
i_N Input noise current	$B(-3 \text{ dB}) = 10 \text{ to } 20,000 \text{ Hz}$		0.1		nA
SVR Supply voltage rejection	$R_L = 4 \Omega$ $G_v = 30 \text{ dB}$ $f_{\text{ripple}} = 100 \text{ Hz}$		50		dB
I_d Drain current	$P_O = 18.5 \text{ W}$ $R_L = 4 \Omega$		1		A
	$P_O = 16.5 \text{ W}$ $V_s = \pm 18 \text{ V}$ $R_L = 8 \Omega$		0.7		A
T_{sd} Thermal shut-down junction temperature			140		$^{\circ}C$
T_{sd} Thermal shut-down case temperature	$P_{\text{tot}} = 15.5 \text{ W}$		105		$^{\circ}C$

Fig. 1 - Output power vs. supply voltage

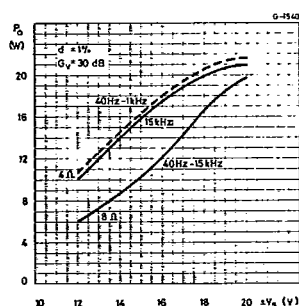


Fig. 2 - Output power vs. supply voltage

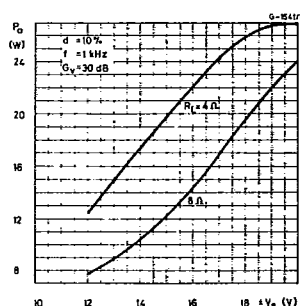
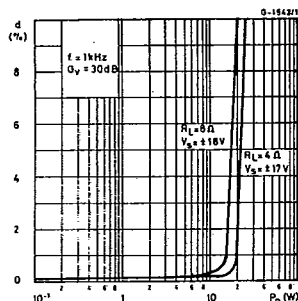


Fig. 3 - Distortion vs. output power





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Fig. 4 - Distortion vs. output power ($R_L = 4 \Omega$)

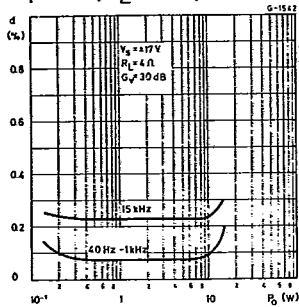


Fig. 5 - Distortion vs. output power ($R_L = 8 \Omega$)

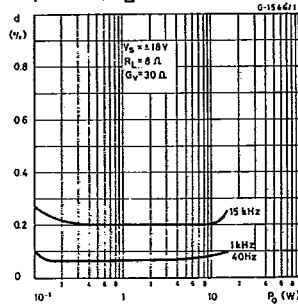


Fig. 6 - Distortion vs. frequency

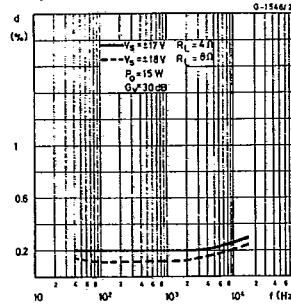


Fig. 7 - Output power vs. frequency

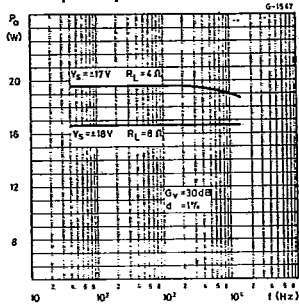


Fig. 8 - Sensitivity vs. output power ($R_L = 4 \Omega$)

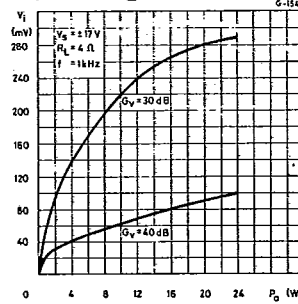


Fig. 9 - Sensitivity vs. output power ($R_L = 8 \Omega$)

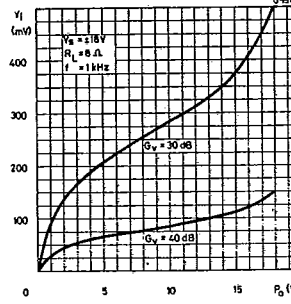


Fig. 10 - Open loop frequency response with different values of the rolloff capacitor C4

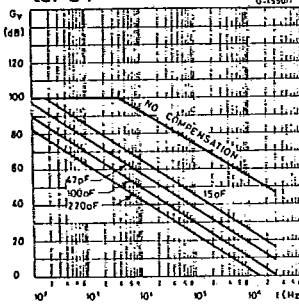


Fig. 11 - Value of C4 vs. voltage gain for different bandwidths

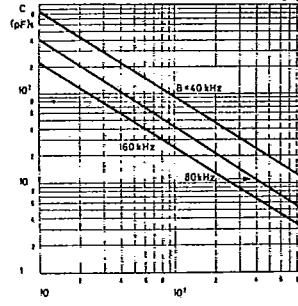
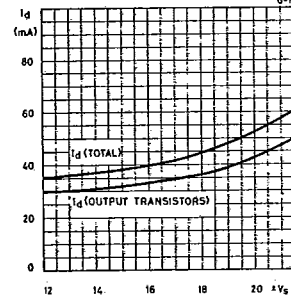


Fig. 12 - Quiescent current vs. supply voltage





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Fig. 13 - Supply voltage rejection vs. voltage gain

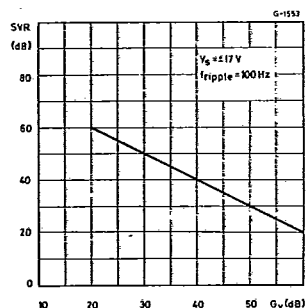


Fig. 14 - Power dissipation and efficiency vs. output power

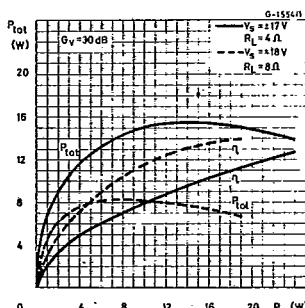
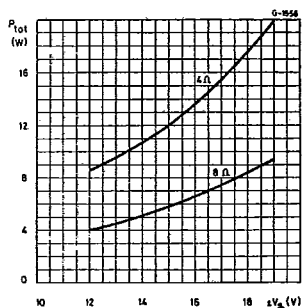


Fig. 15 - Maximum power dissipation vs. supply voltage (sine wave operation)



APPLICATION INFORMATION

Fig. 16 - Application circuit with split power supply

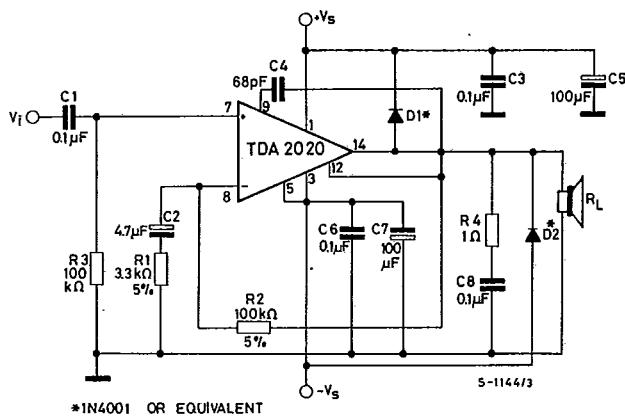


Fig. 17 - P.C. Board and component layout for the circuit of fig. 16 (1:1 scale)



Fig. 18 - 30W bridge amplifier configuration with split power supply ($R_L = 8 \Omega$ d $\leq 1\%$; $V_s = \pm 17V$)

