TA7205AP

5.8W AUDIO POWER AMPLIFIER

FOR CAR-STEREO, CAR-RADIO OUTPUT

. Output Power:

P_{OUT}=5.8W(Typ.) at V_{CC}=13.2V, R_L=4Ω, THD=10%

P_{OUT}=9.2W(Typ.) at V_{CC}=13.2V, R_L=2Ω, THD=10%

. Maximum Output Power:

P_{OM}=9.5W(Typ.) at V_{CC}=13.2V, R_L=4Ω

. Low Distortion:

THD=0.15% at P_{OUT}=1W, G_V=55dB

THD=0.07% at P_{OUT}=1W, G_V=44dB

. Wide Operating Supply Voltage Range : V_{CC}=9~18V

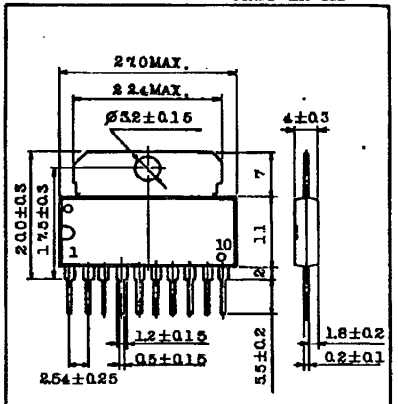
. Low Noise.

. Current Limiting for Short-Circuit Protection.

. Built in Thermal Short-down Circuit.

. Built in Surge Voltage Protection Circuit.

Unit in mm



JEDEC	—
TOSHIBA	S10AP-P

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Operating Supply Voltage	V_{CC}	18	V
Quiescent Supply Voltage	V_{CCQ}	25	V
Output Current (Peak)	$I_{O(peak)}$	4.5	A
Power Dissipation	P_D	7.5	W
Operating Temperature	T_{opr}	-20~75	°C
Storage Temperature	T_{stg}	-55~150	°C

(Minimum Operating Voltage is 9V)

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ELECTRICAL CHARACTERISTICS

(Unless otherwise specified V_{CC}=12.5V, R_L=4Ω, R_g=600Ω, R_f=82Ω, f=1kHz, Ta=25°C)

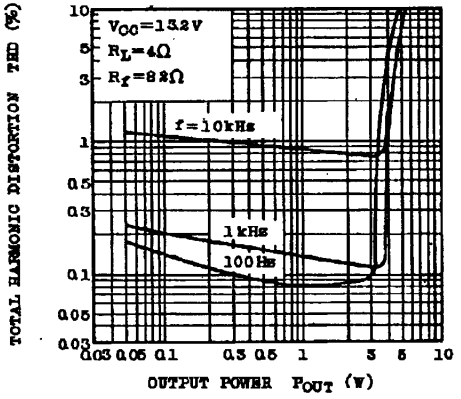
CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Quiescent Current	I_{CCQ}	-	-	-	-	60	mA
			V_{CC}=18V	-	-	80	
Output Power	P_{OUT}	-	THD=10%	4.5	5	-	W
		-	V_{CC}=13.2V, THD=10%	-	5.8	-	
			V_{CC}=13.2V, R_L=2Ω, THD=10%	-	9.2	-	
Maximum Output Power	P_{OM}	-	V_{CC}=13.2V	-	9.5	-	W
Total Harmonic Distortion	THD	-	P_{OUT}=1W	-	0.15	1.0	%
			P_{OUT}=100mW	-	0.2	1.0	
			P_{OUT}=1W, R_L=2Ω	-	0.25	1.0	
Voltage Gain (Note)	Gv	-	V_{IN}=2.45mV$_{rms}$	52	55	58	dB
Input Resistance	R_{IN}	-	V_{OUT}=2V$_{rms}$	30	40	-	kΩ
Output Noise Voltage	V_{NO}	-	R_g=10kΩ, BW=50 ~ 20kHz	-	-	3.5	mV

Note: In regard to the value of voltage gain (closed loop), it is possible to be classified.

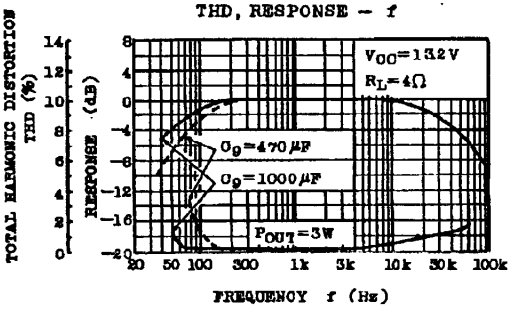
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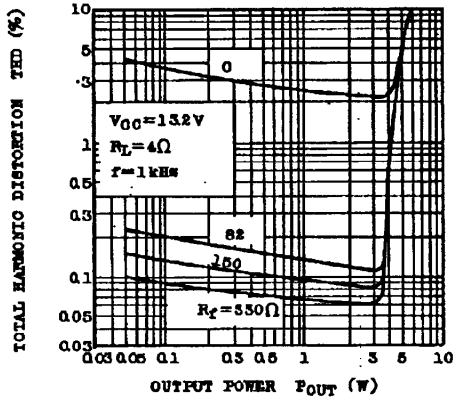
THD – P_{OUT}



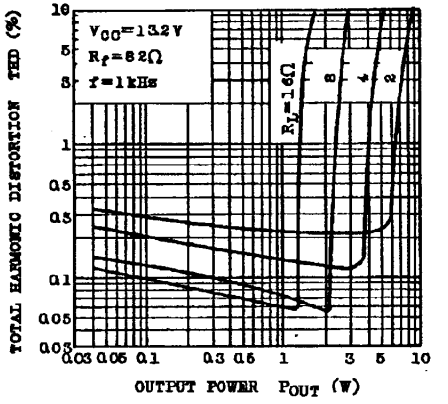
THD, RESPONSE – f



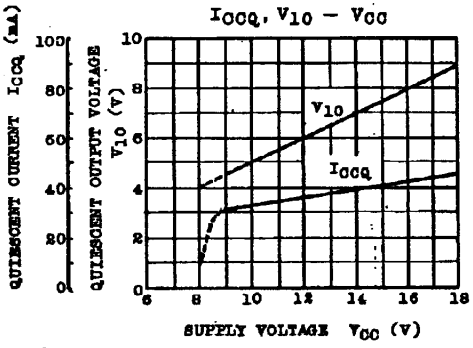
THD – P_{OUT}



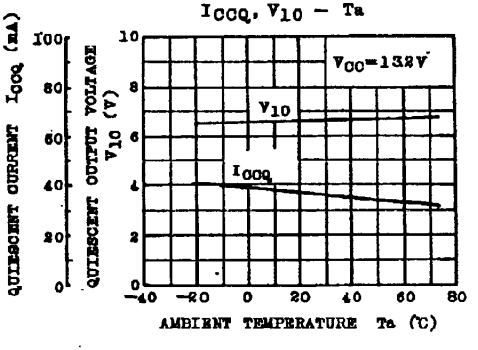
THD – P_{OUT}



I_{CCQ}, V_{10} – V_{CC}



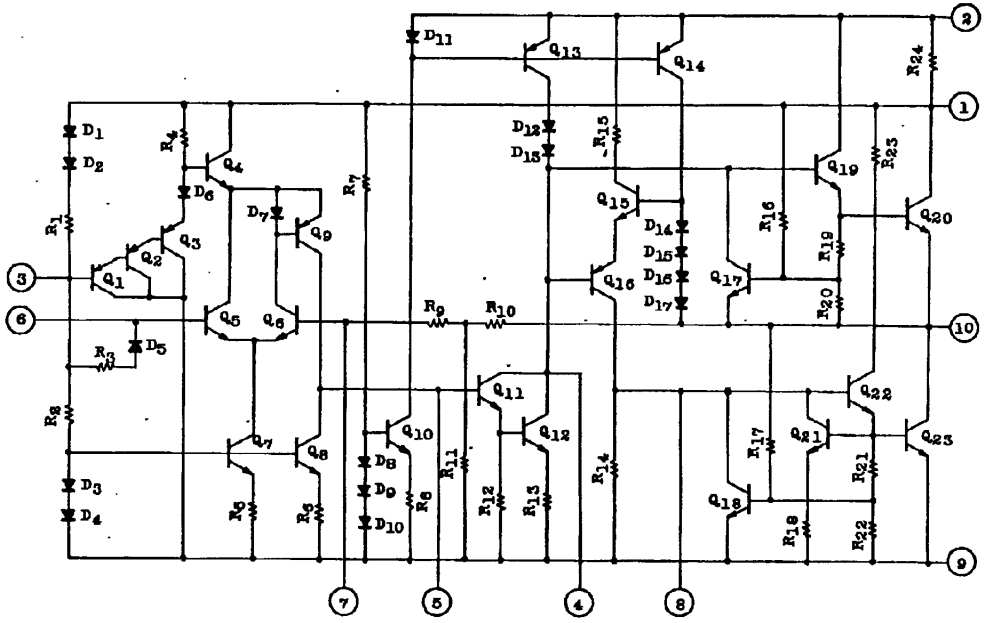
I_{CCQ}, V_{10} – Ta



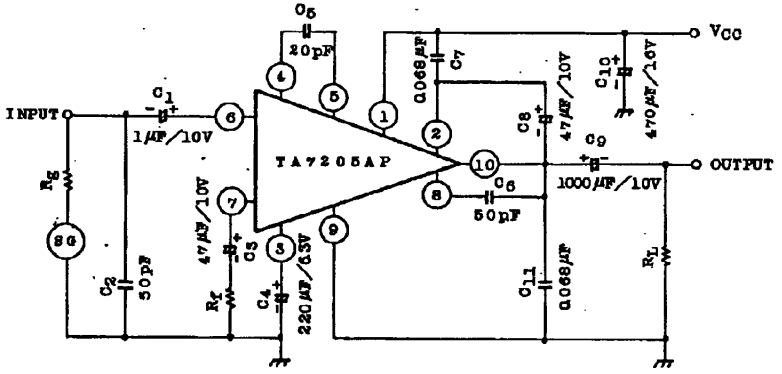
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EQUIVALENT CIRCUIT



TEST AND APPLICATION CIRCUIT



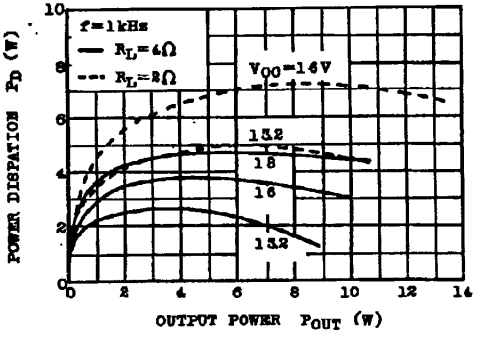
Note: Metal Tab must be connected to GND level or Non-connection.

C_7 and C_{11} are polyester film capacitors.

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$P_D - P_{OUT}$



$P_D - Ta$

