NTE ELECTRONICS, INC.
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NTE1370
Integrated Circuit
Audio Power Amplifier, 5.8W, for Car Radio

Features:

- 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 to 18V
- Minimum Working Voltage: 9V
- Excessive Supply Voltage Protection Circuit
- Current Limiting for Short Circuit Protection
- Thermal Shut–Down Circuit

Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

Operating Supply Voltage, V_{CC} 18V
Quiescent Supply Voltage, V_{CCQ} 25V
Output Current (Peak), $I_{O(peak)}$ 4.5A
Power Dissipation, P_D 7.5W
Operating Temperature Range, T_{opr} . . . . . –20° to +75°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C

Electrical Characteristics: (V_{CC} = 12.5V, R_L = 4Ω, R_g = 600Ω, R_f = 8Ω, f = 1kHz, T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Current	I_{CCQ}	V_{CC} = 12.5V	–	–	60	mA
		V_{CC} = 18V	–	–	80	
Output Power	P_{OUT}	V_{CC} = 12.5V, THD = 10%	4.5	5	–	W
		V_{CC} = 13.2V, THD = 10%	–	5.8	–	
		V_{CC} = 13.2V, R_L = 2Ω,	–	9.2	–	
		THD = 10%				

Electrical Characteristics (Cont'd): (V_{CC} = 12.5V, R_L = 4Ω, R_g = 600Ω, R_f = 8Ω, f = 1kHz, T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
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	G_V	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

Pin Connection Diagram
(Front View)