

NTE7088 Integrated Circuit Audio Power Amplifier, 18 Watt BTL x 2 Channel

Description:

The NTE7088 is an integrated circuit in a 17-Lead Staggered SIP type package designed for car audio applications. This device has two built-in channels to reduce the characteristic difference between Left and Right channels. In addition, the functions of stand-by and muting, and a variety of protection circuits are included.

Features:

- Low Thermal Resistance
- High Power
- Low Distortion Ratio
- Low Noise
- Built-In Stand-by Function
- Built-In Muting Function
- Built-In Protection Circuits:
 Thermal Shutdown, Overvoltage, Out → V_{CC} short, Out → GND short, OUT – OUT short

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

Peak Supply Voltage (0.2sec), V _{CC} surge	50V
DC Supply Voltage, V _{CC} DC	25V
Operating Supply Voltage, V _{CC} opr	18V
Output Current (Peak), I _O (peak)	9A
Power Dissipation, P _D	50W
Operating Temperature Range, T _{opr}	–30° to +85°C
Storage Temperature Range, T _{stg}	–55° to +150°C

Electrical Characteristics: (V_{CC} = 13.2V, R_L = 4Ω, f = 1kHz, T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Supply Current	I _{CCQ}	V _{IN} = 0	–	120	250	mA
Output Power	P _{OUT(1)}	V _{CC} = 14.4V, THD = 10%	–	18	–	W
	P _{OUT(2)}	THD = 10%	11	15	–	W

Electrical Characteristics (Cont'd): ($V_{CC} = 13.2V$, $R_L = 4\Omega$, $f = 1kHz$, $T_A = +25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Harmonic Distortion Ratio	THD	$P_{OUT} = 1W$	–	0.04	0.4	%
Voltage Gain	G_V		48	50	52	dB
Output Noise Voltage	V_{NO}	$R_g = 0\Omega$, BW = 20Hz to 20kHz	–	0.3	0.7	nV_{rms}
Ripple Rejection Ratio	RR	$f_{ripple} = 100Hz$, $R_g = 600\Omega$	40	54	–	dB
Input Resistance	R_{IN}		–	30	–	$k\Omega$
Output Offset Voltage	V_{offset}	$V_{IN} = 0$	–0.3	0	+0.3	V
Current at Stand-by State	I_{SB}		–	1	10	μA
Crosstalk	CT	$R_g = 600\Omega$, $V_{OUT} = 0dBm$	–	60	–	dB
Pin4 Control Voltage	V (SB)	Stand-by → OFF (Power → ON)	2.5	–	V_{CC}	V
Pin1 Control Voltage	V (MUTE)	Mute → ON (Power → OFF)	–	1.0	2.0	V

Pin Connection Diagram
(Front View)



