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NTE7100
Integrated Circuit
Protector IC for Stereo Power Amplifier

Description:

The NTE7100 is a monolithic integrated circuit in an 8–Lead SIP type package designed for protecting stereo power amplifiers and loudspeakers.

Features:

- Work Stably Within a Wide Power Supply Range: V_{CC} = 25V to 60V
- Contains a Relay Driver: I_6 = 80mA max
- Pin3 can be used for Either a Latching Function or Automatic Resetting Function (In Both Overload Detection and Output Offset Detection, Either Function can be Selected)
- Single Power Supply
- Both Positive and Negative Output Offset can be Detected Through the Same Pin (Output Offset Detection Through Pin2)
- AC Voltage can be Detected (For AC–Power–OFF Mute Through Pin4)
- The Time Delay from Amplifier Power ON to Relay ON can be Freely Set by Selecting External Components. (For AC–Power–ON Mute Through Pin7)

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

Power Supply Voltage, V_{CC} 60V
Allowable Power Dissipation (T_A = +75°C), P_D 320mW
Maximum Voltage At:
- Pin4, V_4max 10V
- Pin8, V_8max 8V
- Pin7, V_7max 8V

Maximum Current At:
- Pin6, I_6max 80mA
- Pin1, I_1max 3mA
- Pin2, I_2max . . . . . ±3mA

Operating Temperature Range, T_{opr} . . . . . –20° to +75°C
Storage Temperature Range, T_{stg} . . . . . –40° to +125°C

Recommended Operating Conditions:

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Voltage	V_{CC}		25	45	60	V

Electrical Characteristics: (V_{CC} = 45V, T_A = +25°C, State using latching function)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Pin1 Threshold Voltage	V_{th} 1	Level to invert at Pin6	0.58	0.67	0.76	V
Pin2 Positive Threshold Voltage	V_{th} +2	Level to invert at Pin6	0.54	0.62	0.70	V
Pin2 Negative Threshold Voltage	V_{th} –2	Level to invert at Pin6	–0.12	–0.17	–0.23	V
Pin4 Threshold Voltage	V_{th} 4	Level to invert at Pin6	0.60	0.74	0.90	V
Pin8 Reference Voltage	V_8	R_L = 1.5kΩ	3.0	3.4	3.8	V

Pin Connection Diagram
(Front View)