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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: ($T_A = +25^{\circ}C$ unless otherwise specified)

Power Supply Voltage, V_{CC}	60V
Allowable Power Dissipation ($T_A = +75^{\circ}C$), 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}	$\pm 3mA$
Operating Temperature Range, T_{opr}	-20° to $+75^{\circ}C$
Storage Temperature Range, T_{stg}	-40° to $+125^{\circ}C$

Recommended Operating Conditions:

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

Electrical Characteristics: ($V_{CC} = 45V$, $T_A = +25^{\circ}C$, 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	$R_L = 1.5k\Omega$	3.0	3.4	3.8	V

Pin Connection Diagram
(Front View)

