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NTE1478
Integrated Circuit
Solenoid Driver & Signal Sensing Circuit

Description:

The NTE1478 is an integrated circuit in a 10–Lead SIP type package that detects the stopping of a rotary signal and drives a plunger. It is designed for use in auto–reverse and auto–eject car stereo applications and can be used as a solenoid driver in many other control circuits.

Features:

- Internal Output Power Transistor: 5A Load Current Capability
- Programmable Switch: Manual Operation Can be Obtained
- Pause Switch: Switching Pause (Switch ON), Plunger Does Not Operate Even if the Rotary Detective Signal Stops.
- Internal Load Dump Protector (Excessive Supply Voltage)
- Response Time and Driving Time are Variable with External Capacitors
- Input Sensitivity Voltage: $2V_{P–P}$ Min
- Operating Supply Voltage Range: V_{CC} = 9V to 18V

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

Supply Voltage, V_{CC} 18V
Load Current, I_{OUT} 5A
Power Dissipation (T_C = +25°C), P_D 12.5W
Peak Supply Voltage (1200 ms), V_{CC}surge 40V
Operating Temperature Range, T_{opr} . . . . . –30° to +75°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C

Electrical Characteristics: (V_{CC} = 13.2V, R_L = 3.3Ω, T_A = +25°C, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Plunger Response Time	T_{rp}	C_1 = 47µF, C_2 = 10µF	–	1.3	–	sec
Plunger Driving Time	T_{dp}	C_1 = 47µF, C_2 = 10µF	–	100	–	msec
Supply Current	$I_{CC(OFF)}$	Current at Plunger OFF	3.0	5.6	9.0	mA
	$I_{CC(ON)}$	Current at Plunger ON	–	3.96	–	A
Pin2 Voltage	V_2	Pin8 = GND, Pin4 = 9V	–	0.6	1.0	V
Power Transistor Cutoff Current	I_{CER}	Pin2 = 40V, Pin10 = GND	–	–	100	µA

Pin Connection Diagram
(Front View)