



Current Drivers

NH0028C/NH0028CN

NH0028C/NH0028CN hammer driver

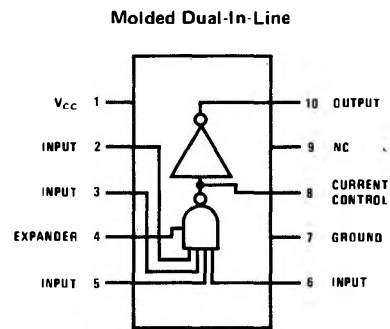
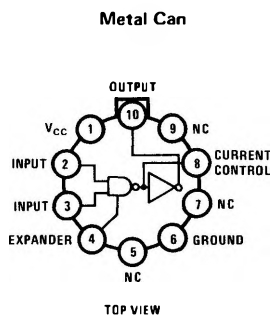
general description

The NH0028C/NH0028CN is a high current hammer driver designed for utilization in a wide variety of printer applications. The device is capable of driving 6 amp pulsed loads at duty cycles up to 10% (1 ms ON/10 ms OFF). The input is DTL/TTL compatible and requires only a single voltage supply in the range of 10V to 45V.

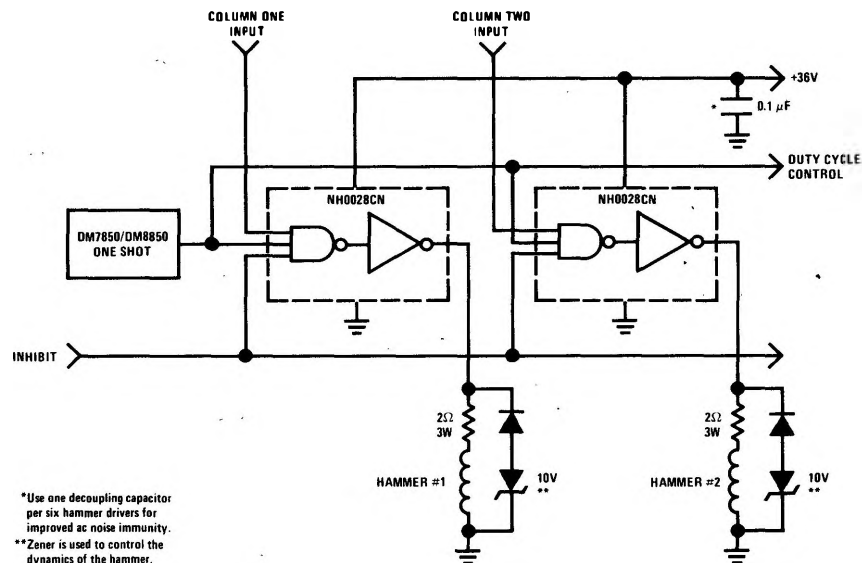
Additional features include:

- Low standby power: 45 mW at $V_{CC} = 36V$, 35 mW at $V_{CC} = 28V$.
- AND input with expander affords logic flexibility.
- Fast turn-on, typically 200 ns.

connection diagrams



typical application



absolute maximum ratings

Continuous Supply Voltage	45V
Instantaneous Peak Supply Voltage (Pin 1 to Ground for 0.1 sec)	60V
Input Voltage	5.5V
Expander Input Current	5.0 mA
Peak Output Current (1 ms ON/10 ms OFF)	6.5A
Continuous Output Current NH0028C at 25°C	750 mA
NH0028CN at 25°C	1000 mA
Operating Temperature	0°C to 70°C
Storage Temperature	-65° to +175°C
Lead Soldering Temperature (10 sec)	300°C

electrical characteristics (Note 1)

PARAMETER	CONDITIONS	MIN	TYP (Note 1)	MAX	UNITS
Logical "1" Input Voltage	$V_{CC} = 10V$ to 45V	2.0			V
Logical "0" Input Voltage	$V_{CC} = 10V$ to 45V			0.8	V
Logical "0" Input Current	$V_{CC} = 45V, V_{IN} = 0.4V$		0.8	1.0	mA
Logical "1" Input Current	$V_{CC} = 45V, V_{IN} = 2.4V$ $V_{CC} = 45V, V_{IN} = 5.5V$		0.5	5.0 100.0	μA μA
Logical "1" Output Voltage	$V_{CC} = 45V, V_{IN} = 2.0V,$ $I_{OUT} = 1.6A$ $V_{CC} = 36V, V_{IN} = 2.0V,$ $I_{OUT} = 5A$ (Note 2)	43.0 33.5	43.5 34.0		V V
Logical "0" Output Voltage	$V_{CC} = 45V, R_L = 1k, V_{IN} = 0.8V$.020	100	V
OFF Power Supply Current	$V_{CC} = 45V, V_{IN} = 0.0V$		1.6	2.0	mA
Rise Time (10% to 90%)	$V_{CC} = 45V, R_L = 39\Omega$ $V_{IN} = 5.0V$ peak, PRF = 1 kHz		0.2		μs
Fall Time (90% to 10%)	$V_{CC} = 45V, R_L = 39\Omega$ $V_{IN} = 5.0V$ peak, PRF = 1 kHz		3.0		μs
T_{ON}	$V_{CC} = 45V, R_L = 39\Omega$ $V_{IN} = 5.0V$ peak, PRF = 1 kHz		0.4		μs
T_{OFF}	$V_{CC} = 45V, R_L = 39\Omega$ $V_{IN} = 5.0V$ peak, PRF = 1 kHz		7.0		μs

Note 1: These specifications apply for ambient temperatures from 0°C to 70°C unless otherwise specified. All typical values are for 25°C ambient.

Note 2: Measurement made at 1 ms ON and 10 ms OFF.

Note 3: Power ratings for the NH0028C are based on a maximum junction temperature of 175°C and a thermal resistance of 210°C/W.

Note 4: Power ratings for the NH0028CN are based on a maximum junction temperature of 175°C and a thermal resistance of 150°C/W.

typical performance characteristics

Waveforms for Typical Drum Printer Hammer

