ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089

NTE1705
Integrated Circuit
VCR Hall Switch

Description:

This device operates with a small permanent magnet and provides switching operation by increasing or decreasing the magnetic flux density. The device features operation on alternate magnetic field and a wide range of operating temperature.

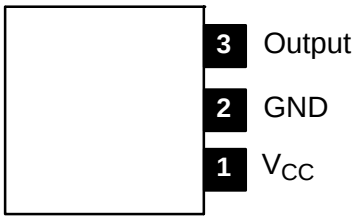
Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

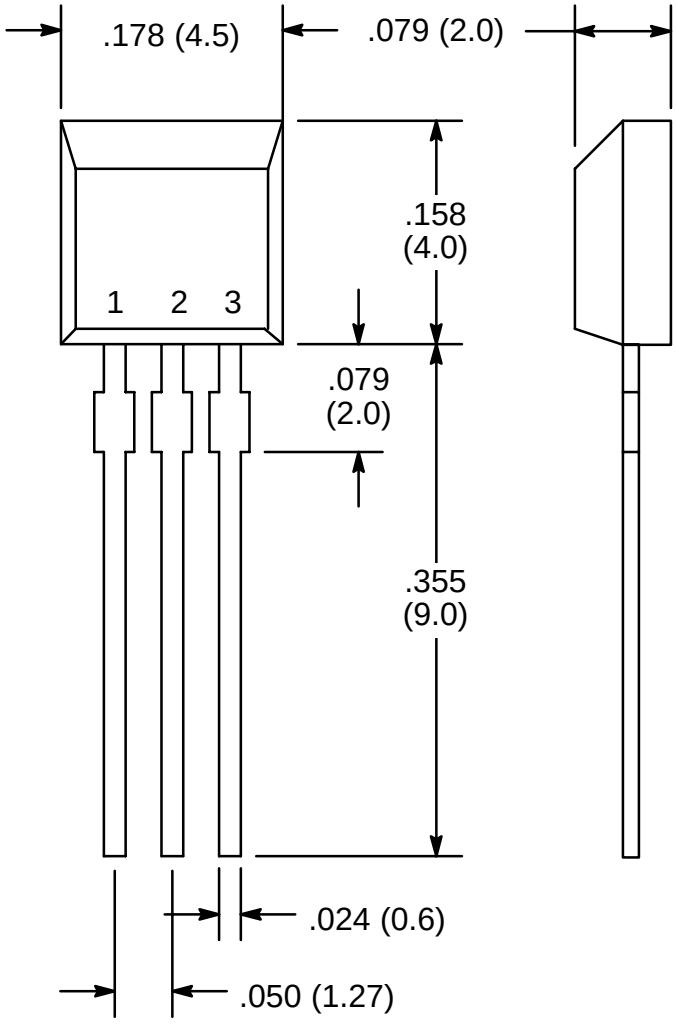
Supply Voltage, V_{CC} 18V
Supply Current, I_{CC} 8mA
Output Current, I_O . . . . . –1/20mA
Power Dissipation, P_D 100mW
Operating Temperature Range, T_{opr} . . . . . –40° to +100°C
Storage Temperature Range, T_{stg} . . . . . –55° to +125°C

Electrical Characteristics: (T_A = +25°C, V_{CC} = 12V unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Magnetic Flux Density Output LOW → HIGH	$B_{(L \rightarrow H)}$		–300	–	–	Gauss
Magnetic Flux Density Output HIGH → LOW	$B_{(H \rightarrow L)}$		–	–	300	Gauss
Output Voltage, “L” Level	V_{OL}	V_{CC} = 16V, I_O = 12mA, B = 300Gauss	–	–	0.4	V
		V_{CC} = 8V, I_O = 12mA, B = 300Gauss	–	–	0.4	V
Output Voltage, “H” Level	V_{OH}	V_{CC} = 16V, I_O = –30μA, B = 300Gauss	12	–	–	V
		V_{CC} = 8V, I_O = –30μA, B = 300Gauss	4	–	–	V
Output Short–Circuit Current	$–I_{OS}$	V_{CC} = 16V, V_O = 0, B = –300Gauss	0.32	–	0.68	mA
Supply Current	I_{CC}	V_{CC} = 16V	–	–	6.0	mA
		V_{CC} = 8V	–	–	5.5	mA

Pin Connection Diagram
(Front View)





Pin 1. V_{CC}
2. GND
3. Output