

Features and Benefits

- **Magnetic Type: Uni-polar**
- **Wide Operating Voltage Range:**
Supply Voltage 4.5~24V
- **Specified Operating Temperature Range:**
From -40°C~85°C
- **Magnetic Sensitivity**
- **Package**
TO-92S

Applications

- Automotive, Home appliances, Industrial
- Speed Detection
- Position Detection
- Magnetic Encoder
- Solid-State Switch
- Proximity Switch

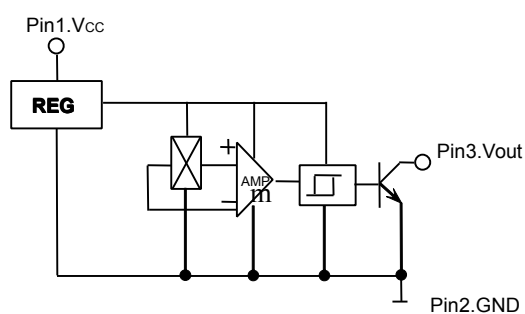
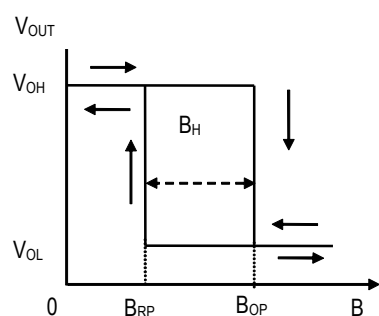
The 3144 is small, versatile digital Hall-effect devices that are operated by the magnetic field from a permanent magnet or an electromagnet. Unipolar respond to a single pole: South

These unipolar sensors are designed to meet the requirements of a wide range of potential applications. These economical unipolar sensors are well suited for simple, high-volume, cost-sensitive position and motion sensing applications.

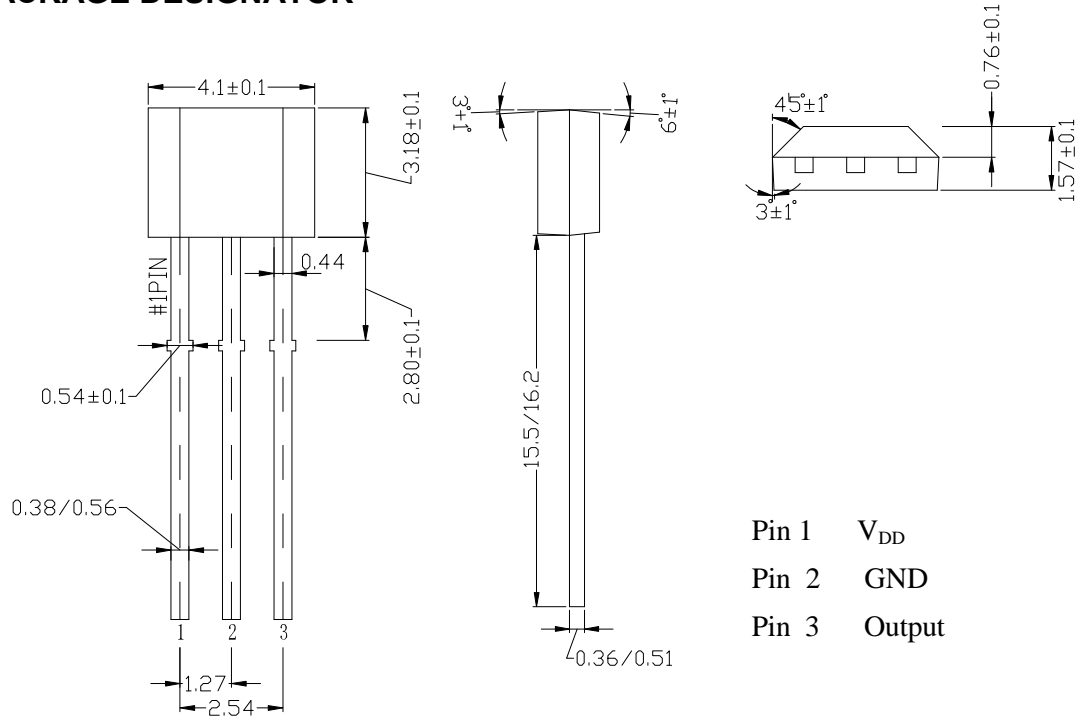
The 4.5Vdc to 24Vdc supply voltage range allows this device to be used in very wide voltage applications.

Symbol	Parameters	Test Conditions	Min	Typ	Max	Units
V_{DD}	Supply voltage	-25°C to 85°C	4.5	-	24	V
I_{DD}	Supply Current	$V_{DD} = 12V$	-	5.0	8	mA
V_{DSon}	Output saturation voltage	at 20mA, Gauss >Bop	-	-	0.4	V
I_{OFF}	Output Leakage Current	$B < B_{rp}$	-	-	10	uA
T_R	Output rise time	$V_{DD} = 12V$ at 25 °C $C_L = 20$ pF	-	-	1.5	uS
T_F	Output fall time	$V_{DD} = 12V$ at 25 °C $C_L = 20$ pF	-	-	1.5	uS
B_{OP}	Magnetic operating point	$T_A = 25^\circ C$	70		180	Gauss
B_{RP}	Magnetic release point	$T_A = 25^\circ C$	25		150	Gauss
B_{HYST}	Magnetic hysteresis window	$T_A = 25^\circ C$ $ B_{OP} - B_{RP} $	30	55	80	Gauss
T	Operating temperature		-25	-	85	°C
T_S	Storage temperature:	-	-65	-	150	°C

Parameters	Symbol	Min	Max	Units
Supply Voltage	V_{DD}	-	30	V
VDD Reverse Voltage VDD	V_{RDD}	-	-30	V
Output Voltage	V_{OUT}	-	30	V
Output Current	I_{OUT}	-	25	mA
Operating Ambient Temperature	T_A	-25	85	°C
Storage Temperature	T_S	-65	150	°C
Magnetic Flux	B	No Limit		Gauss



PACKAGE DESIGNATOR (unit :mm)



- Pin 1 V_{DD}
- Pin 2 GND
- Pin 3 Output