

# LT260A

## ■ Features

- Operation by small magnet due to high sensitivity  
Operating point <math>< 10\text{mT}</math>
- Combining a GaAs Hall device and an IC in a compact package (2.9 X 1.5 X 1.1mm)
- Wide operation temperature range obtained by GaAs Hall device (-20 to +125°C)
- Long life time due to noncontact-type

## ■ Applications

- FDD
- HDD
- Water meter
- Car stereo
- Microswitch, etc.

## ■ Absolute Maximum Ratings

(T<sub>a</sub> = 25°C)

Parameter	Symbol	Rating	Unit
Supply voltage	V <sub>CC</sub>	18	v
Output voltage	V <sub>OUT</sub>	18	v
Output current	I <sub>O</sub>	5	mA
Power dissipation	P <sub>I</sub>	100	mW
Operating temperature	T <sub>opr</sub>	-20 to +125	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C
Soldering temperature*1	T <sub>sol</sub>	260	°C

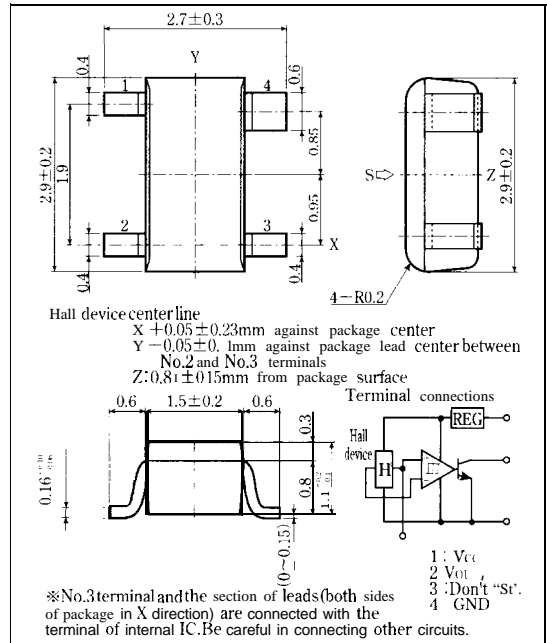
\*1 Soldering time within 10 seconds

## GaAs Hall IC for Noncontact Switch (Alternating magnetic field-type)

\* Zero-cross is not warranted.

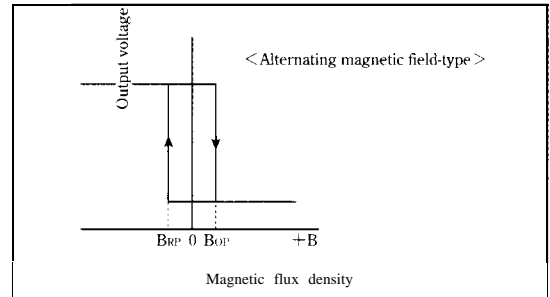
## ■ Outline Dimensions

(Unit : mm)



As for dimensions of tape-packaged products, refer to page 44.

## ■ Operating Explanation

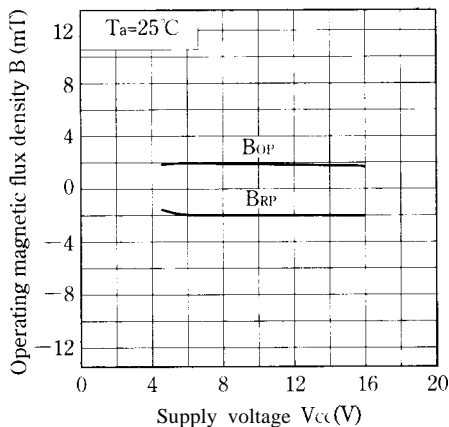


## ■ Electrical Characteristics

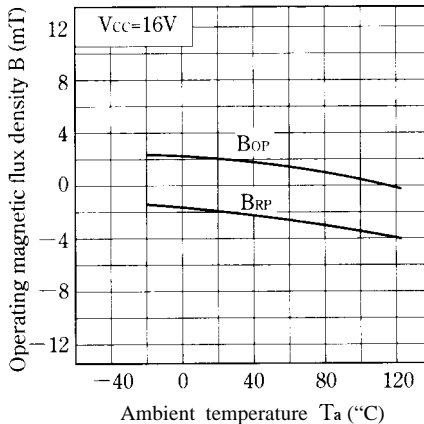
(T<sub>a</sub> = 25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
operating magnetic flux density	B <sub>OP</sub>	V <sub>CC</sub> = 16V	—	—	10	mT
	B <sub>RP</sub>	V <sub>OO</sub> = 16V	-10	—	—	mT
Hysteresis breadth	B <sub>H</sub>	R <sub>I</sub> = 10kΩ	—	—	5	mT
Operating voltage	V <sub>CC</sub>		4.5	—	16	V
Supply current	I <sub>CC</sub>	V <sub>CC</sub> = 16V, B ≤ -10mT	—	—	10.5	mA
Low level output voltage	v <sub>OL</sub>	I <sub>O</sub> = 4mA, B ≥ 10mT	—	—	0.4	v
Output leakage current	I <sub>OH</sub>	V <sub>CC</sub> = 16V, B ≤ 10mT, V <sub>OO</sub> = 16V	—	—	10	μA
Operating point temperature drift	ΔB <sub>OP</sub>	V <sub>CC</sub> = 16V, T <sub>a</sub> = -20°C to +80°C	-6	—	6	mT

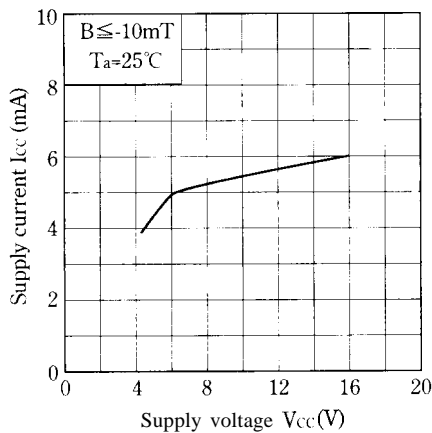
**Fig. 1 Operating Magnetic Flux Density vs. Supply Voltage**



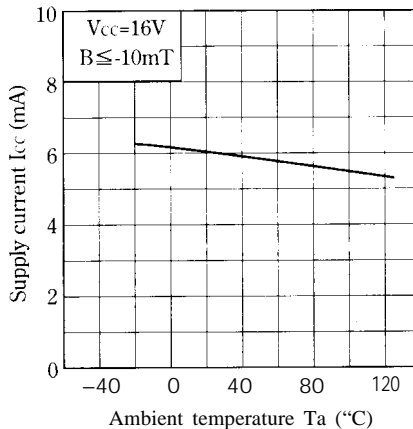
**Fig. 2 Operating Magnetic Flux Density vs. Ambient Temperature**



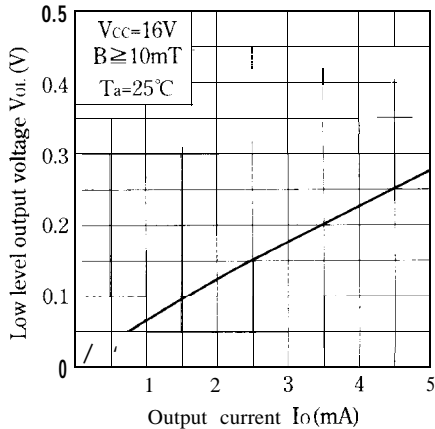
**Fig. 3 Supply Current vs. Supply Voltage**



**Fig. 4 Supply Current vs. Ambient Temperature**



**Fig. 5 Low Level Output Voltage vs. Output Current**



**Fig. 6 Low Level Output Voltage vs. Ambient Temperature**

