

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_a = 25°C)

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

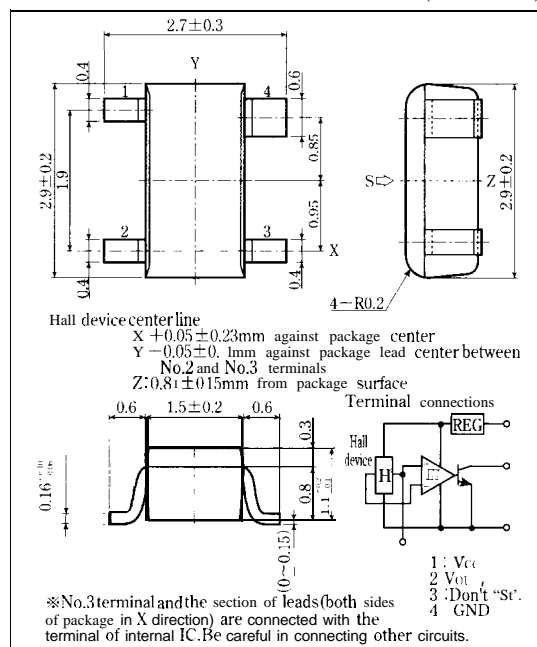
*1 Soldering time within 10 seconds

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

* Zero-cross is not warranted.

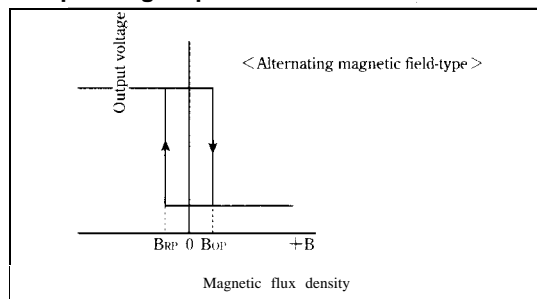
■ Outline Dimensions

(Unit : mm)



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

■ Operating Explanation



■ Electrical Characteristics

(T_a = 25°C)

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

Fig. 1 Operating Magnetic Flux Density vs. Supply Voltage

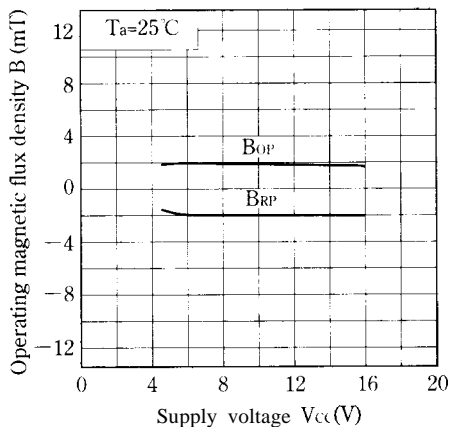


Fig. 2 Operating Magnetic Flux Density vs. Ambient Temperature

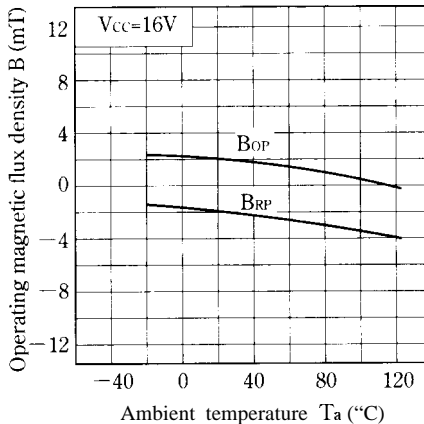


Fig. 3 Supply Current vs. Supply Voltage

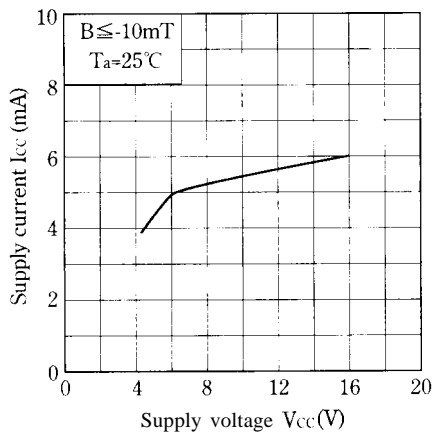


Fig. 4 Supply Current vs. Ambient Temperature

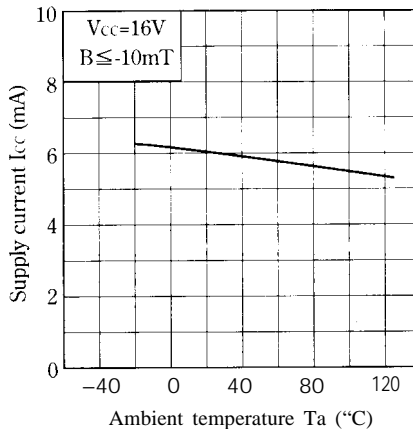


Fig. 5 Low Level Output Voltage vs. Output Current

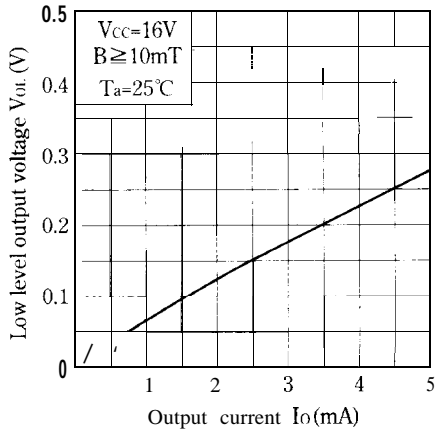


Fig. 6 Low Level Output Voltage vs. Ambient Temperature

