LT261A

GaAs Hall IC for Noncontact Switch
(Alternating magnetic field-type*)
*Zero-cross is not warranted.

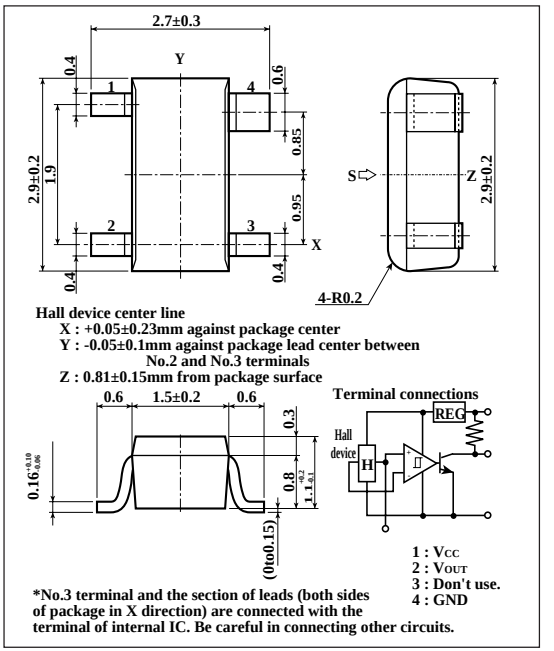
■ Features

- Operation by small magnet due to high sensitivity
  Operating point<10mT
- Combining a GaAs Hall device and an IC in a compact package (2.9X1.5X1.1mm)
- 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.

■ Outline Demensions (Unit : Fmm)



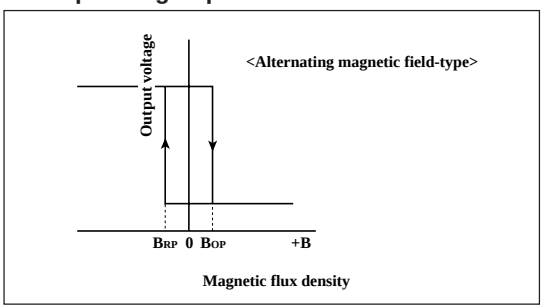
As for dimensions of tape-packaged products, refer to page 44 .

■ Absolute Maximum Ratings (Ta=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_D	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

■ Operating Explanation



■ Electrical Characteristics (Ta=25˚C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Operating magnetic flux density	B_{OP}	V_{CC}=16V, V_{OO}=16V	-	-	10	mT
	B_{RP}		-10	-	-	mT
Hysteresis breadth	B_H		-	-	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}	V_{CC}=16V, I_O=4mA, B>=10mT	-	-	0.4	V
High level output voltage	V_{OH}	V_{CC}=16V, I_O=-100μA, B=<-10mT	13.9	-	-	V
Output short circuit current	I_{OS}	V_{CC}=16V	-1.55	-	-0.80	mA
Operating point temperature drift	ΔB_{OP}	V_{CC}=16V, Ta=-20˚C to +80˚C	-6	-	6	mT

Fig. 1 Operating Magnetic Flux Density vs. Supply Voltage

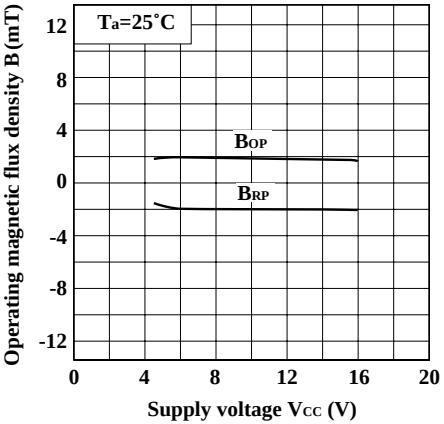


Fig. 2 Operating Magnetic Flux Density vs. Ambient Temperature

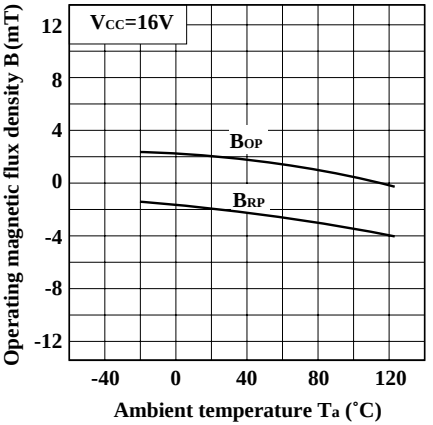


Fig. 3 Supply Current vs. Supply Voltage

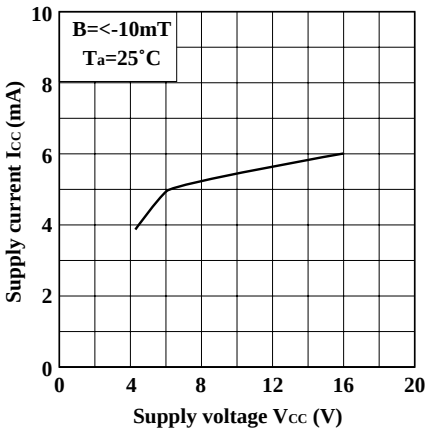


Fig. 4 Supply Current vs. Ambient Temperature

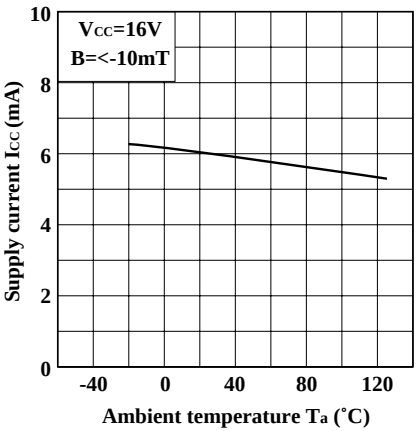


Fig. 5 Low Level Output Voltage vs. Output Current

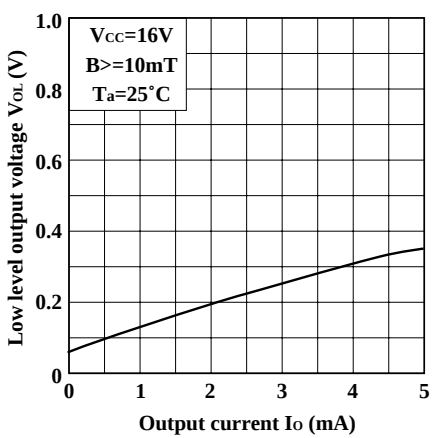


Fig. 6 Low Level Output Voltage vs. Ambient Temperature