

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.

■ Absolute Maximum Ratings

($T_a=25^\circ\text{C}$)

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

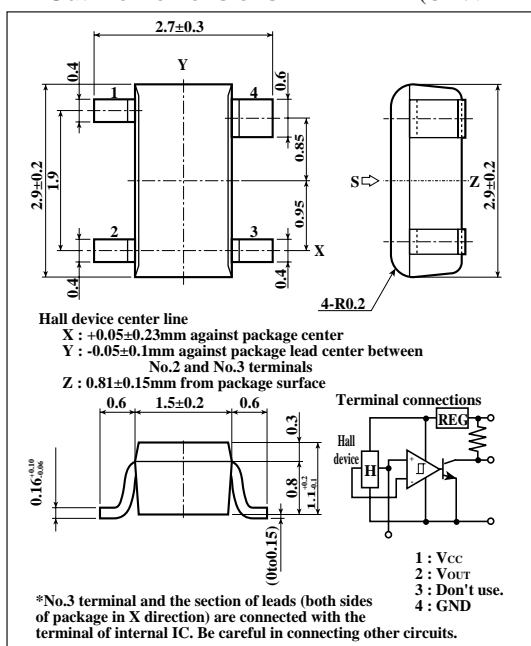
■ Electrical Characteristics

($T_a=25^\circ\text{C}$)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Operating magnetic flux density	B _{OP}	$V_{CC}=16\text{V}$ $V_{OO}=16\text{V}$	-	-	10	mT
	B _{RP}		-10	-	-	mT
Hysteresis breadth	B _H		-	-	5	mT
Operating voltage	V_{CC}		4.5	-	16	V
Supply current	I_{CC}	$V_{CC}=16\text{V}$, $B=<-10\text{mT}$	-	-	10.5	mA
Low level output voltage	V_{OL}	$V_{CC}=16\text{V}$, $I_o=4\text{mA}$, $B>=10\text{mT}$	-	-	0.4	V
High level output voltage	V_{OH}	$V_{CC}=16\text{V}$, $I_o=-100\mu\text{A}$, $B=<-10\text{mT}$	13.9	-	-	V
Output short circuit current	I_{OS}	$V_{CC}=16\text{V}$	-1.55	-	-0.80	mA
Operating point temperature drift	ΔB_{OP}	$V_{CC}=16\text{V}$, $T_a=-20^\circ\text{C}$ to $+80^\circ\text{C}$	-6	-	6	mT

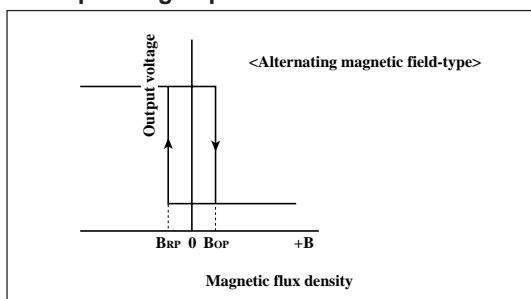
■ Outline Dimensions

(Unit : Fmm)



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

■ Operating Explanation



SHARP

In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc. Contact SHARP in order to obtain the latest device specification sheets before using any SHARP device.

Fig. 1 Operating Magnetic Flux Density vs. Supply Voltage

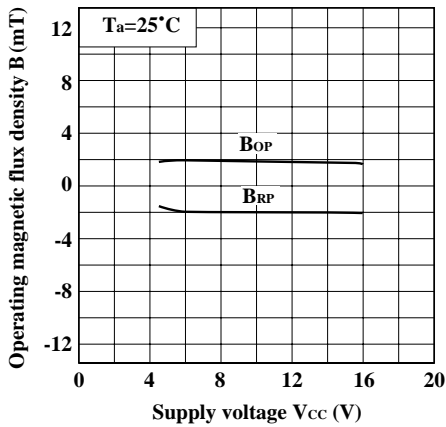


Fig. 2 Operating Magnetic Flux Density vs. Ambient Temperature

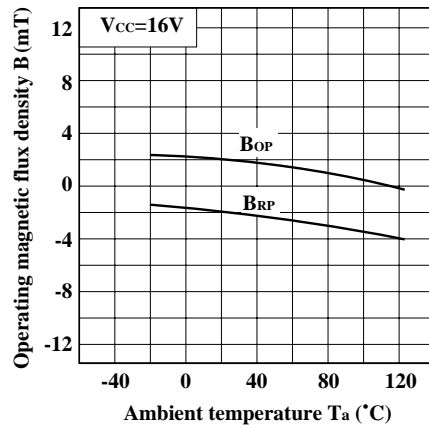


Fig. 3 Supply Current vs. Supply Voltage

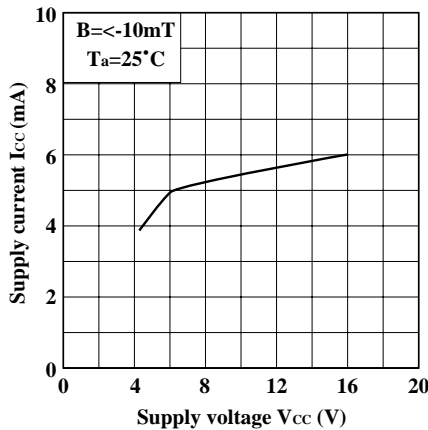


Fig. 4 Supply Current vs. Ambient Temperature

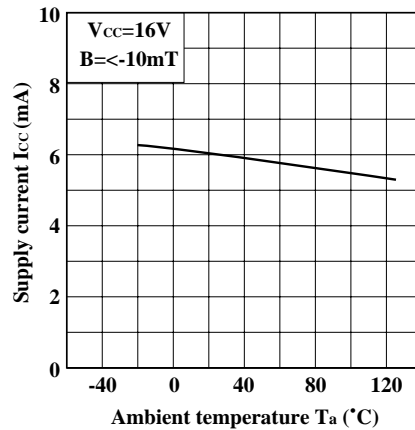


Fig. 5 Low Level Output Voltage vs. Output Current

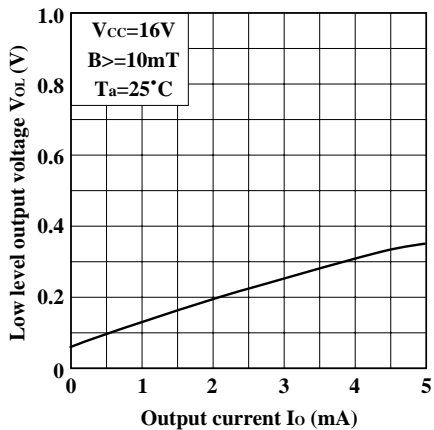


Fig. 6 Low Level Output Voltage vs. Ambient Temperature

