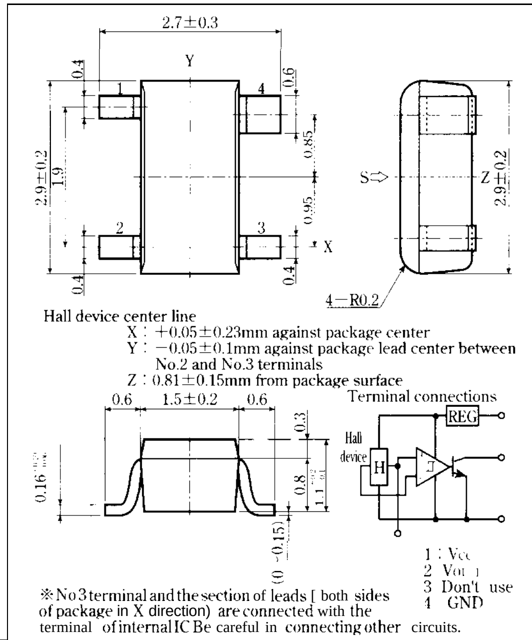
LT230A

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

■ Features

- Same temperature coefficient of magnetic flux density as a magnet
- operation by small magnet due to high sensitivity Operating point <20mT
- 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℃)
- Long life time due to noncontact-type

■ Outline ci mentions (Unit : mm)



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

■ Applications

- FDD
- HDD
- Noncontact switch

■ Absolute Maximum Ratings (T_a=25℃)

Parameter	Symbol	Rating	Unit
Supply voltage	V_{CC}	18	V
output voltage	V_{OH}	18	v
Output current	I_O	5	mA
Power dissipation	P_D	100	mW
Operating temperature	T_{opr}	−20 to +125	℃
Storage temperature	T_{stg}	−55 to +150	℃
Soldering temperature.?.	T_{sol}	260	℃

※ Soldering time within 10 seconds

■ Electrical Characteristics (T_a=25℃)

Parameter	Symbol	Condition	MIN.	TYP.	MAX.	Unit
Operating magnetic flux density	B_{OP}	V_{CC}=5V	−	13	20	mT
	B_{RP}	V_{OO}=5V	5	11		m l
Hysteresis breadth	B_H	R_L=10KΩ	1	−	6	mT
Operating voltage	V_{CC}		4.5	−	16	V
Supply current	I_{CC}	V_{CC}= 16V, B≦5mT			10,5	mA
Low level output voltage	V_{OL}	I_O=4mA, B≧20mT	−	−	0.4	v
Output leakage current	I_{OH}	V_{CC}=16V, V_{OO}=16V, B≦10mT			10	μA
Operating point temperature drift	$\triangle B_{OP}$	V_{CC}=5V, T_a=−20℃ to +80℃	−	−0.2	−	%/℃

Fig. 1 Operating Magnetic Flux Density vs. Supply Voltage

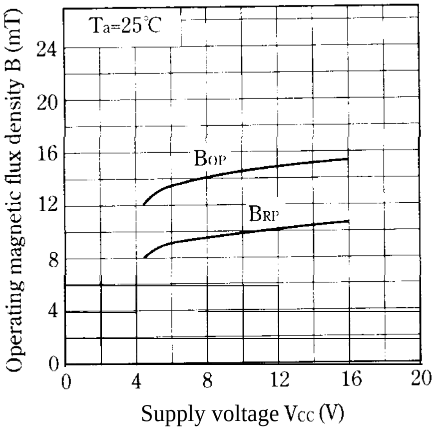


Fig. 2 Operating Magnetic Flux Density vs. Ambient Temperature

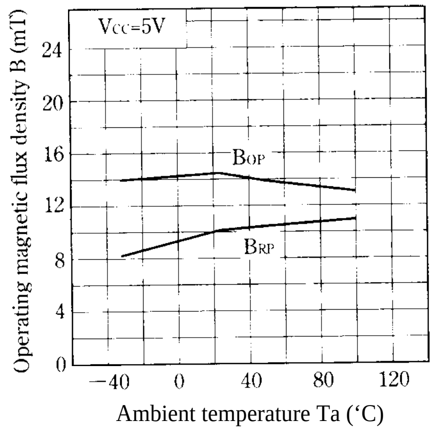


Fig. 3 Supply Current vs. Supply Voltage

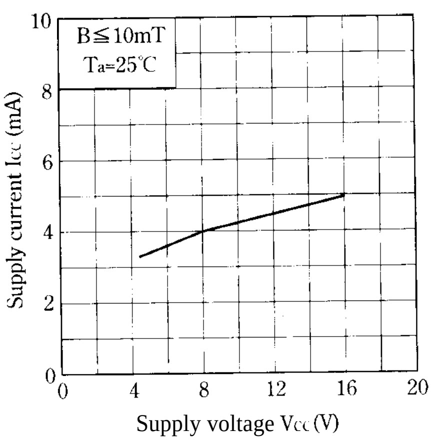


Fig. 4 Supply Current vs. Ambient Temperature

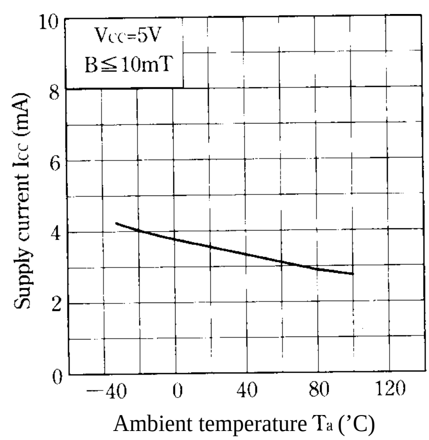


Fig. 5 Low Level Output Voltage vs. Output Current

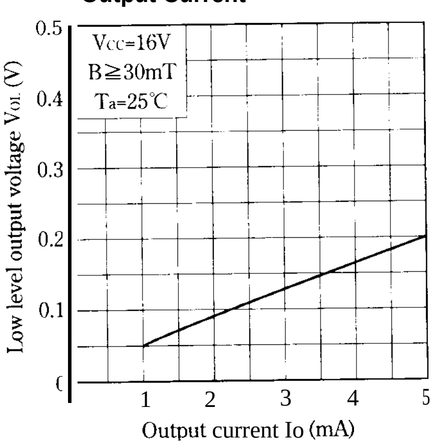


Fig. 6 Low Level Output Voltage vs. Ambient Temperature