



SK1901

LINEAR INTEGRATED CIRCUIT

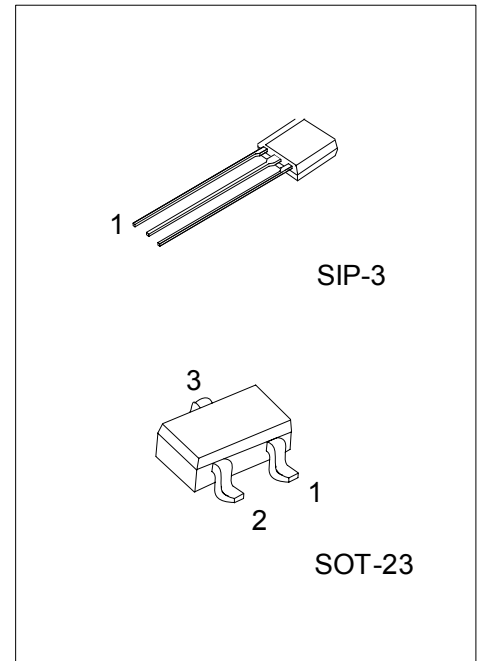
HALL-EFFECT SWITCH FOR HIGH-TEMPERATURE OPERATION

DESCRIPTION

SK1901 is a semiconductor integrated circuit utilizing the Hall effect. It has been so designed as to operate in the alternating magnetic field especially at low supply voltage and operation over extended temperature ranges to +125°C. This Hall IC is suitable for application to various kinds of sensors, contact-less switches, and the like.

FEATURES

- * Wide supply voltage range of 2.5V to 20V
- * Wide temperature operation range of -20°C ~ +125°C
- * TTL and MOS IC are directly drivable by the output
- * The life is semipermanent because it employs contact-less parts
- * SIP-3 package



*Pb-free plating product number: SK1901L

ORDERING INFORMATION

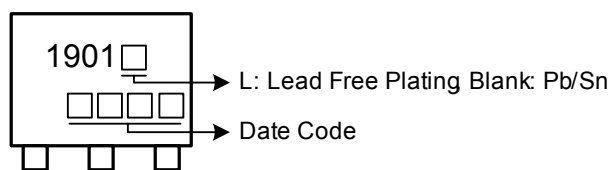
Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
SK1901-AE3-4-R	SK1901L-AE3-4-R	SOT-23	O	I	G	Tape Reel
SK1901-G03-D-K	SK1901L-G03-D-K	SIP-3	I	G	O	Bulk

Note: Pin Assignment: I:V_{CC} O:V_{OUT} G:GND

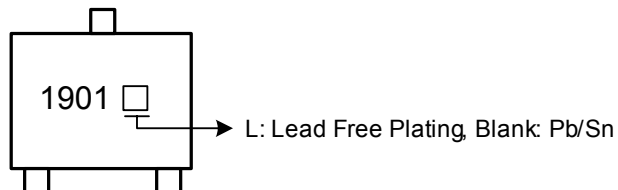
SK1901L-AE3-4-R	(1)Packing Type (2)Pin Assignment (3)Package Type (4)Lead Plating	(1) K: Bulk, R: Tape Reel (2) refer to Pin Assignment (3) AE3: SOT-23, G03: SIP-3 (4) L: Lead Free Plating, Blank: Pb/Sn
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MARKING INFORMATION

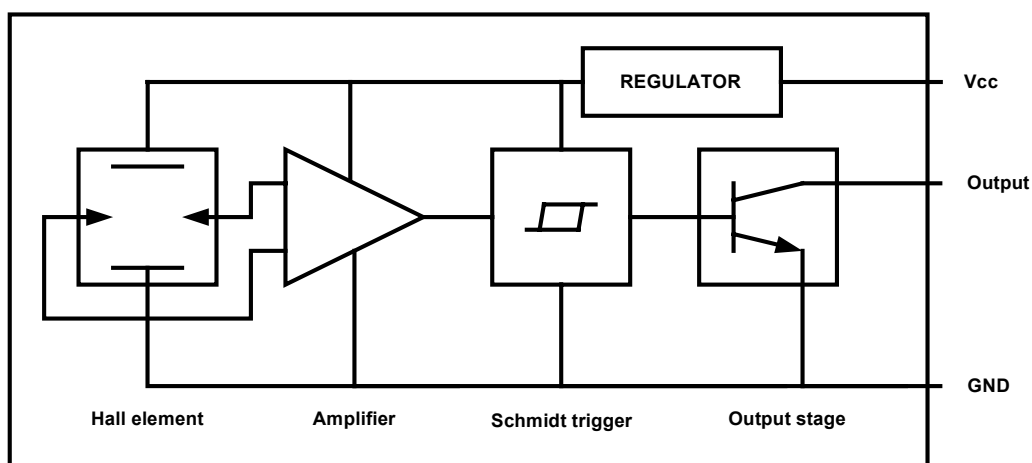
SIP-3



SOT-23



BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS

PARAMETER		SYMBOL	RATINGS	UNIT
Supply voltage		V_{CC}	2.5V ~ 20V	V
Supply current		I_{CC}	10	mA
Circuit current		I_o	20	mA
Power dissipation	SIP-3	P_D	400	mW
	SOT-23		200	mW
Operating ambient temperature		T_{OPR}	-20 ~ +125	°C
Storage temperature		T_{STG}	-55 ~ +150	°C

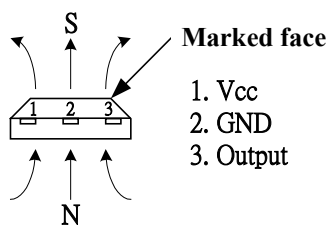
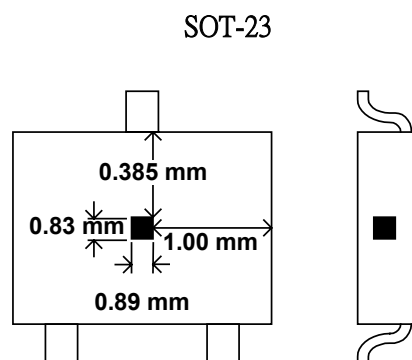
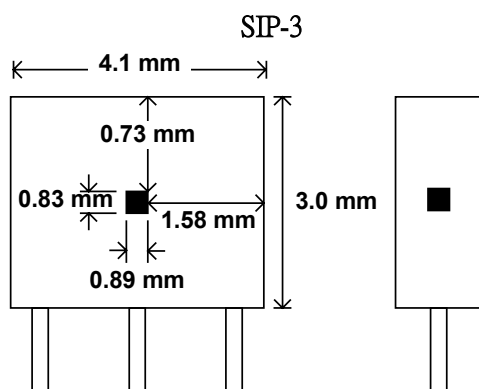
Note 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. The device is guaranteed to meet performance specification within 0°C~+70°C operating temperature range and assured by design from -20°C~+125°C.

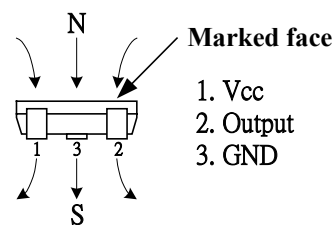
■ MAGNETIC CHARACTERISTICS (over operating supply voltage range.)

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Operate Point	B_{OP}	at $T_a=+25^{\circ}\text{C}$			100	G
Release Point	B_{RP}	at $T_a=+25^{\circ}\text{C}$	10			G
Hysteresis	B_{HYS}	at $T_a=+25^{\circ}\text{C}$		90		G

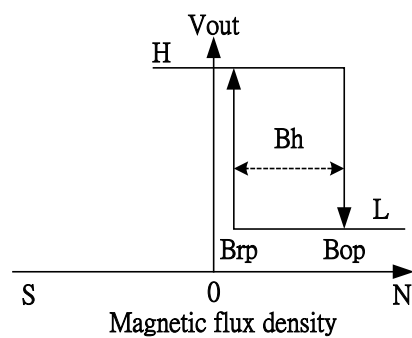
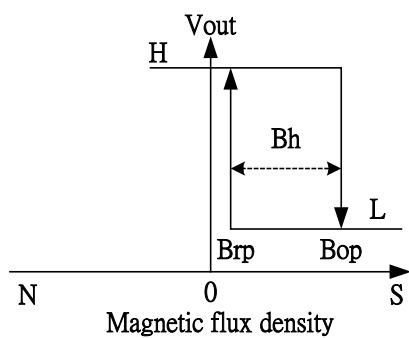
■ PACKAGE INFORMATION



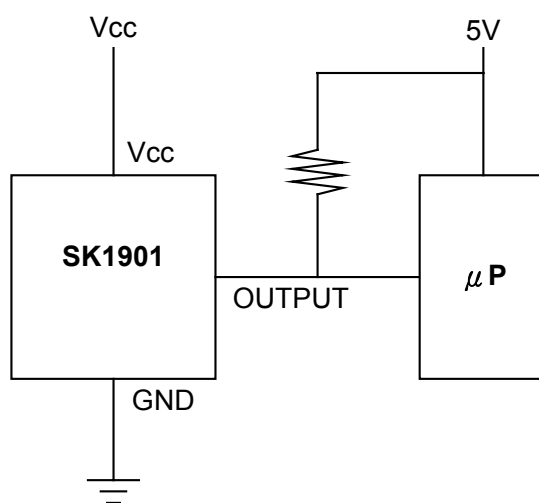
SIP-3



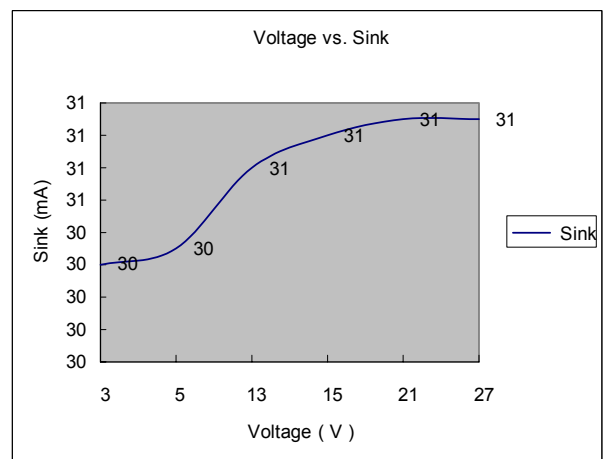
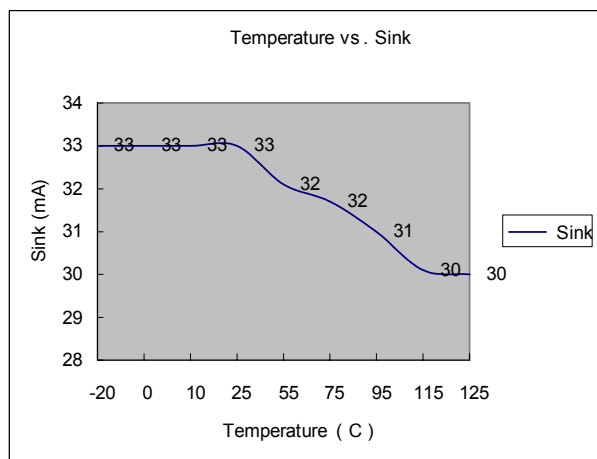
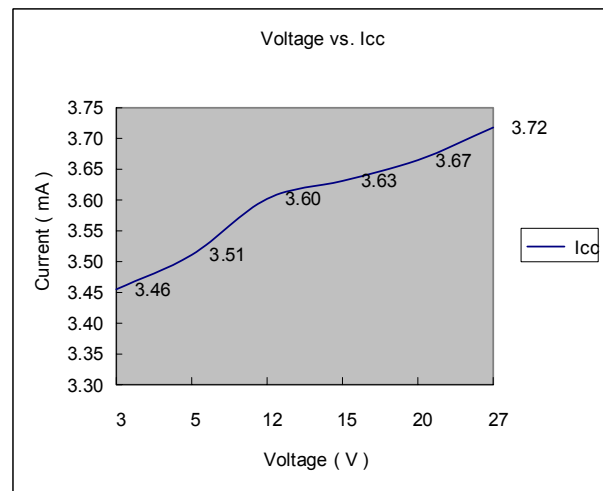
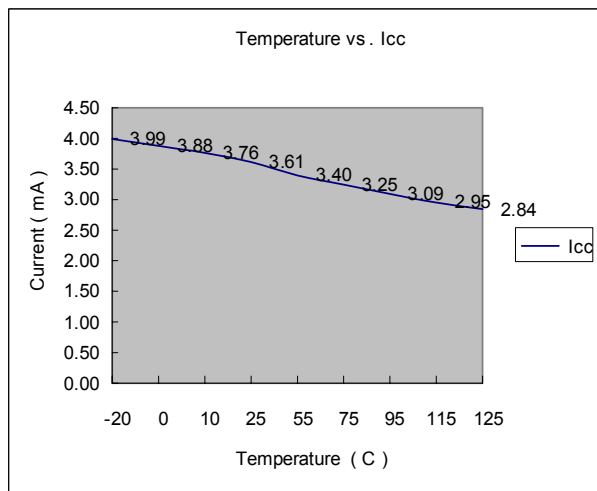
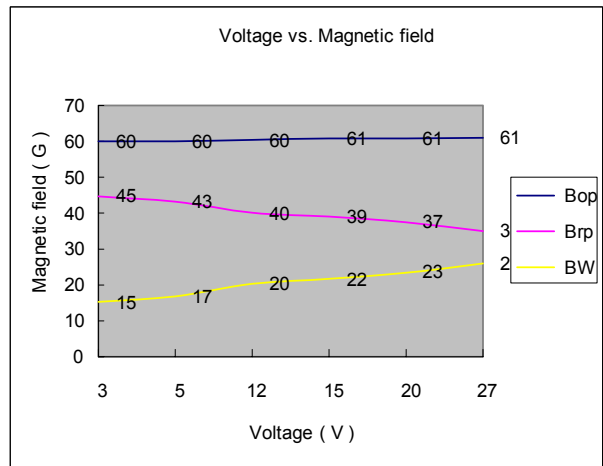
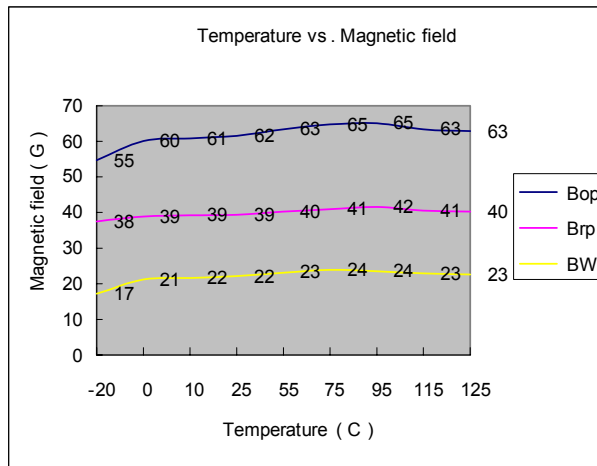
SOT-23



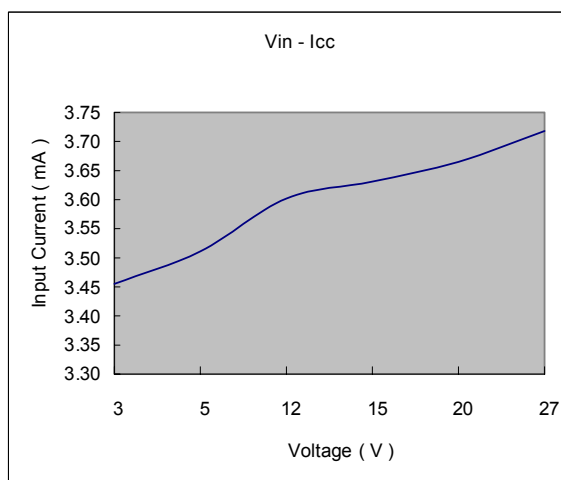
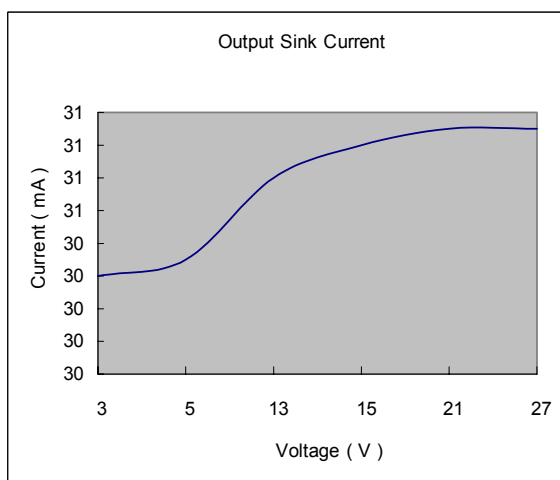
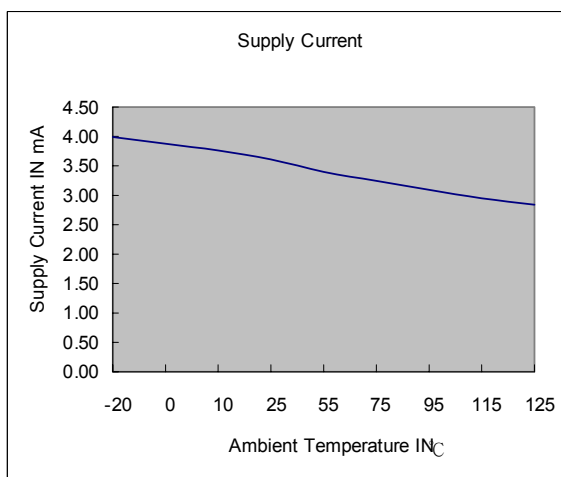
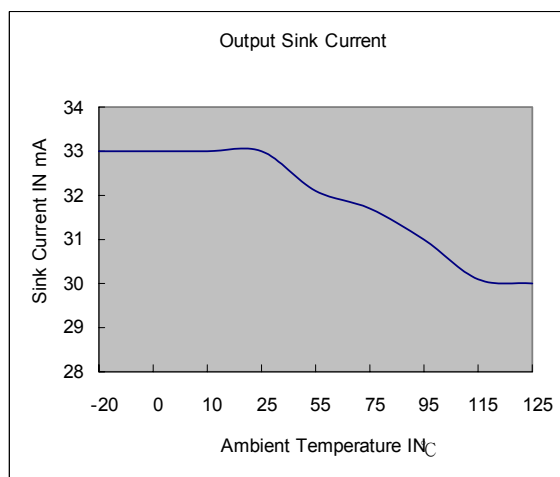
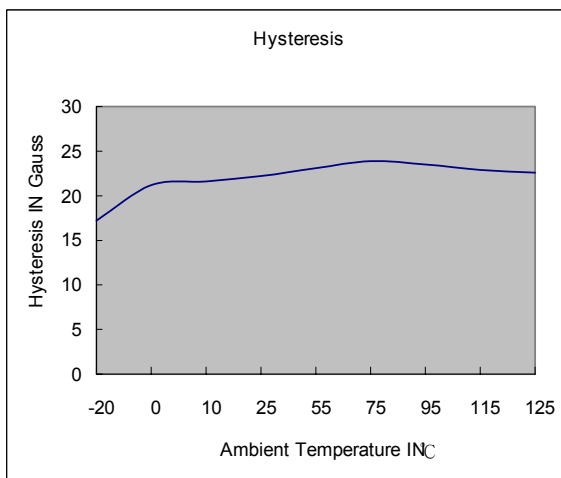
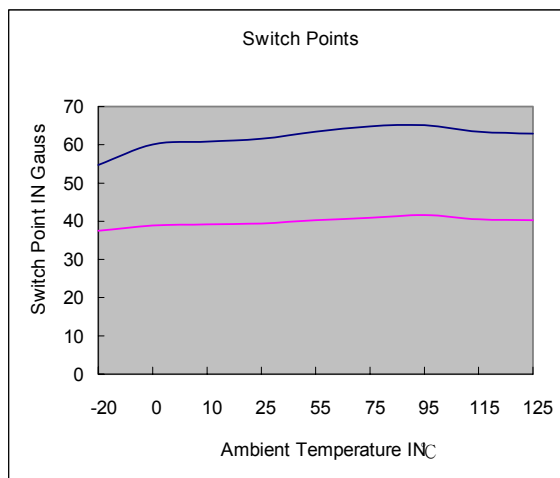
■ TYPICAL APPLICATION CIRCUIT



TYPICAL OPERATING CHARACTERISTICS



■ TYPICAL OPERATING CHARACTERISTICS (Cont.)



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