



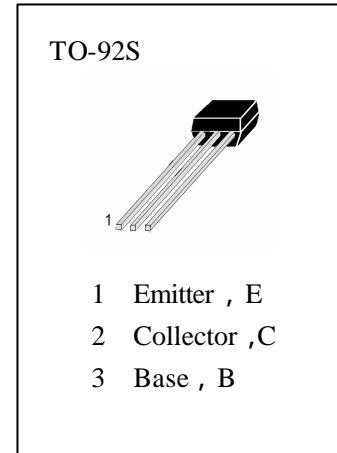
HC114E

APPLICATIONS

Switching Circuit , Interface Circuit.

ABSOLUTE MAXIMUM RATINGS ($T_a=25$)

- T_{stg} —Storage Temperature..... -55~150
- T_j —Junction Temperature.....150
- P_C —Collector Dissipation.....300mW
- V_{CBO} —Collector-Base Voltage.....50V
- V_{CEO} —Collector-Emitter Voltage.....50V
- V_{EBO} —Emitter-Base Voltage..... 10V
- I_C —Collector Current.....-100mA



ELECTRICAL CHARACTERISTICS ($T_a=25$)

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BV_{CBO}	Collector-Base Breakdown Voltage	50			V	$I_C=10\mu A, I_E=0$
BV_{CEO}	Collector-Emitter Breakdown Voltage	50			V	$I_C=0.1mA, I_B=0$
I_{CBO}	Collector Cut-off Current			0.1	μA	$V_{CB}=40V, I_E=0$
I_{CEO}	Collector Cut-off Current			0.5	μA	$V_{CE}=40V, I_B=0$
I_{EBO}	Emitter Cut-off Current	195	250	360	μA	$V_{EB}=5V, I_C=0$
H_{FE}	DC Current Gain	30				$V_{CE}=5V, I_C=5mA$
$V_{CE(sat)}$	Collector- Emitter Saturation Voltage		0.1	0.3	V	$I_C=10mA, I_B=0.5mA$
$V_I (off)$	Input Off Voltage	0.8	1.1	1.5	V	$V_{CE}=5V, I_C=0.1mA$
$V_I (on)$	Input On Voltage	1.0	2.0	4.0	V	$V_{CE}=0.2V, I_C=10mA$
R1	Input Resistor	7.0	10	13	Kohm	
R2/R1	Resistor Ratio	0.8	1.0	1.2		
ft	Current Gain-Bandwidth Product		250		MHZ	$V_{CE}=-10V, I_C=-5mA$



●Electrical characteristic curves

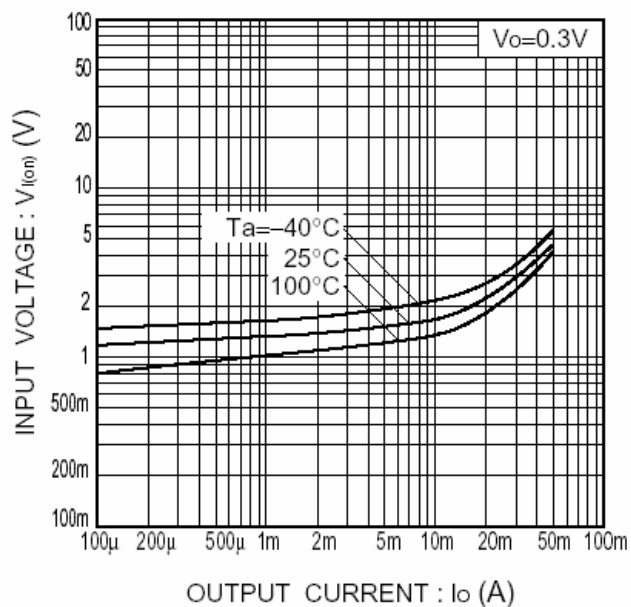


Fig.1 Input voltage vs. output current (ON characteristics)

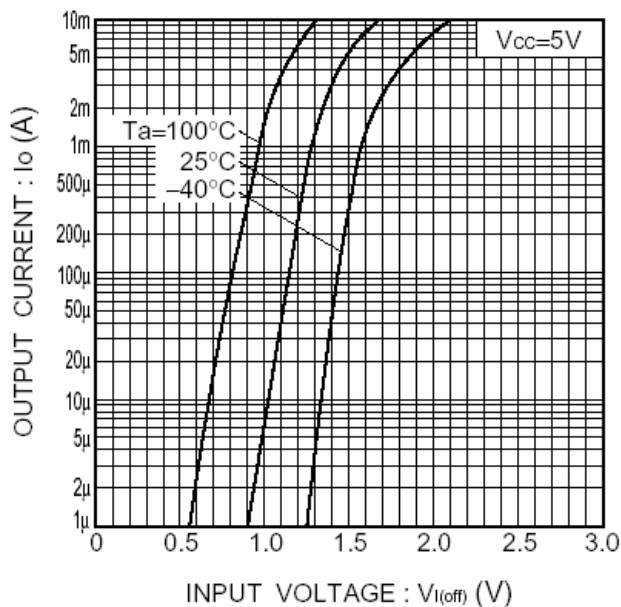


Fig.2 Output current vs. input voltage (OFF characteristics)

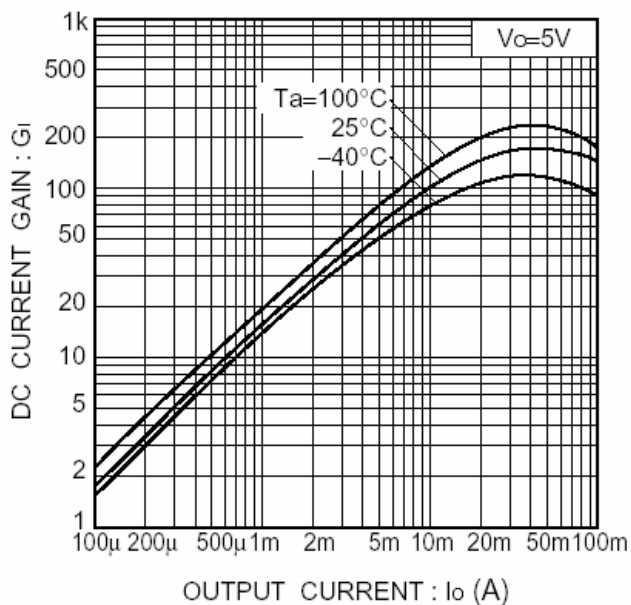


Fig.3 DC current gain vs. output current

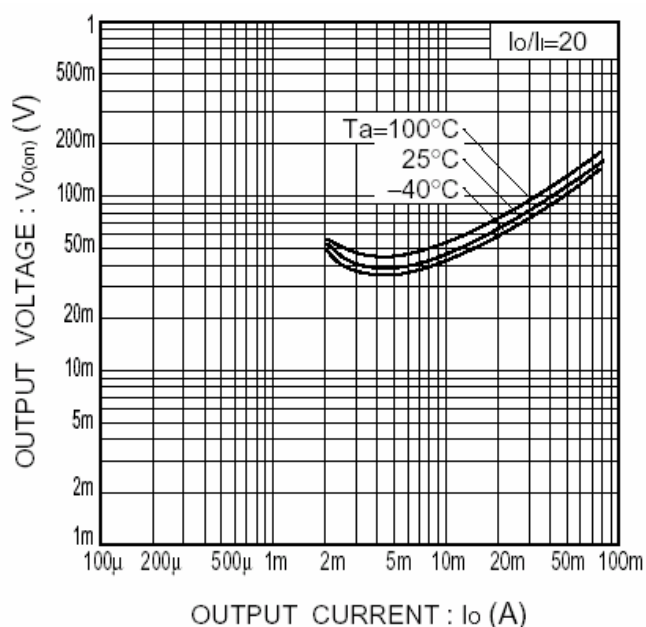


Fig.4 Output voltage vs. output current