



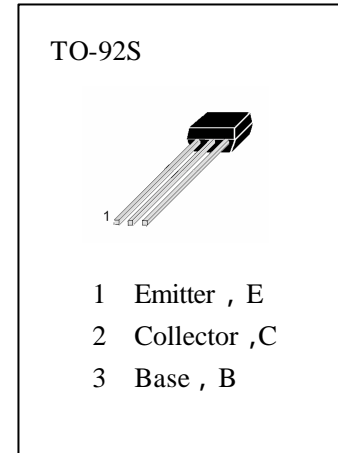
HC114Y

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.....6V
- I_C —Collector Current.....100mA



ELECTRICAL CHARACTERISTICS ($T_a=25$)

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BVCBO	Collector-Base Breakdown Voltage	50			V	$I_C=10\mu A, I_E=0$
BVCEO	Collector-Emitter Breakdown Voltage	50			V	$I_C=1mA, I_B=0$
ICBO	Collector Cut-off Current			0.1	μA	$V_{CB}=40V, I_E=0$
ICEO	Collector Cut-off Current			0.5	μA	$V_{CE}=40V, I_B=0$
IEBO	Emitter Cut-off Current	67	88	125	μA	$V_{EB}=5V, I_C=0$
HFE	DC Current Gain	70				$V_{CE}=5V, I_C=5mA$
$V_{CE(sat)}$	Collector- Emitter Saturation Voltage		0.1	0.3	V	$I_C=10mA, I_B=0.5mA$
V_i (off)	Input Off Voltage	0.5	0.7	0.9	V	$V_{CE}=5V, I_C=0.1mA$
V_i (on)	Input On Voltage	0.7	1.0	2.0	V	$V_{CE}=0.2V, I_C=5mA$
R1	Input Resistor	7.0	10	13	Kohm	
R1/ R2	Resistor Ratio	0.193	0.213	0.234		
ft	Current Gain-Bandwidth Product		250		MHz	$V_{CE}=10V, I_C=5mA$
Cob	Output Capacitance		3.7		pF	$V_{CB}=10V, f=1MHz$



●Electrical characteristic curves

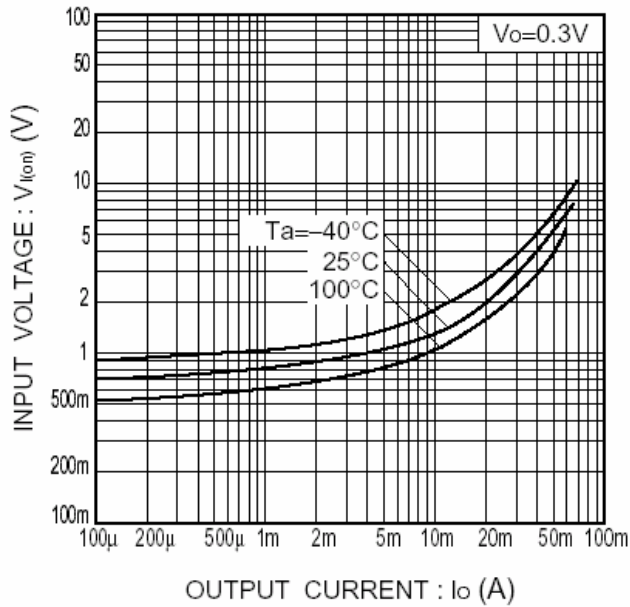


Fig.1 Input voltage vs. output current (ON characteristics)

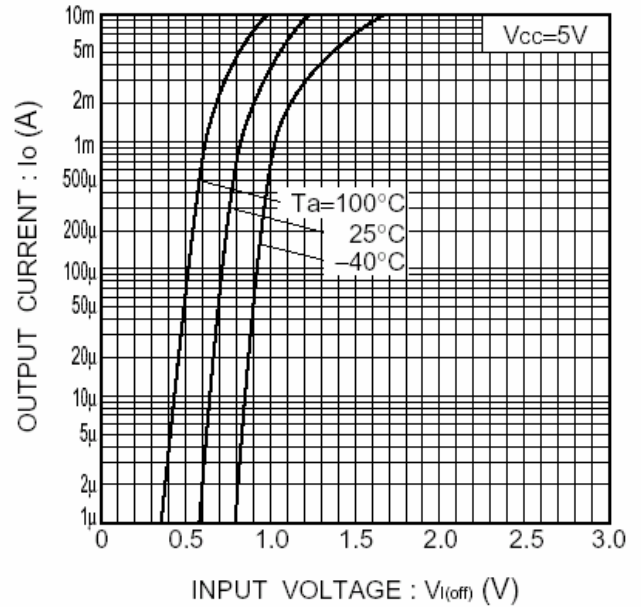


Fig.2 Output current vs. input voltage (OFF characteristics)

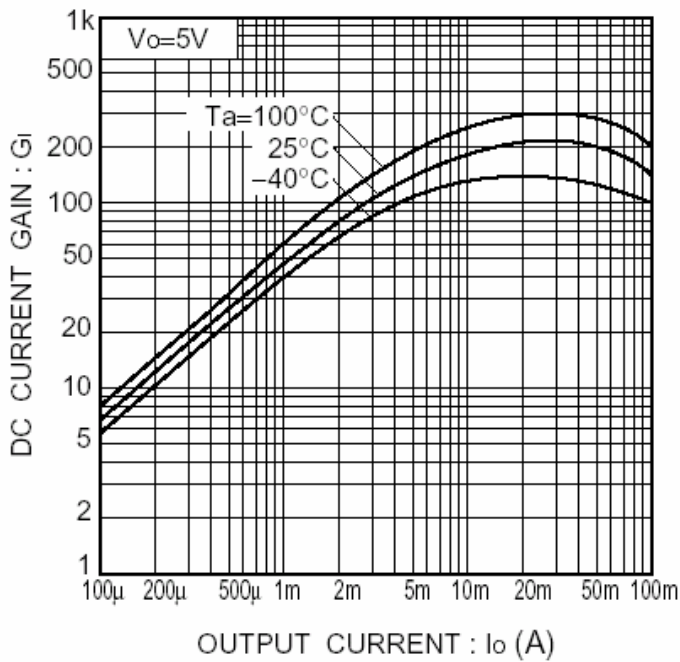


Fig.3 DC current gain vs. output current

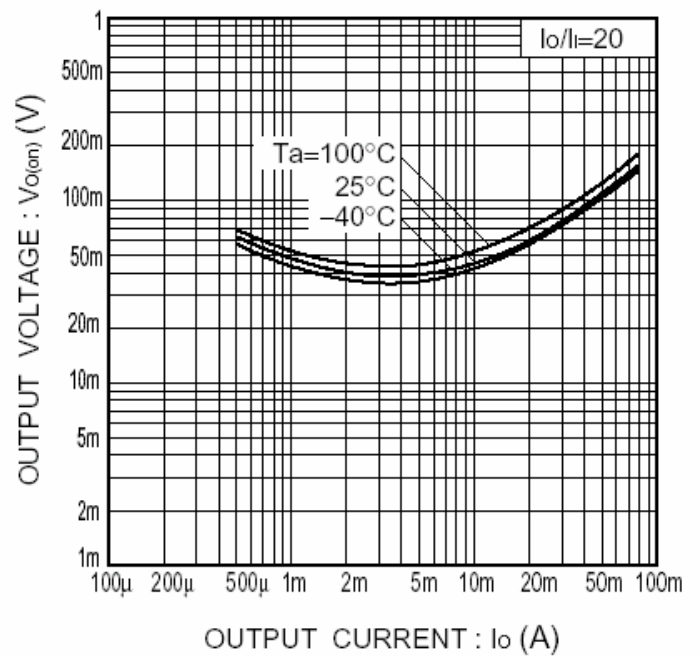


Fig.4 Output voltage vs. output current