

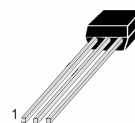
**APPLICATIONS**

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

TO-92S



1—Emitter , E
2—Collector,C
3—Base , B

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	410	532	760	μA	$V_{EB}=5V, I_C=0$
H_{FE}	DC Current Gain	50				$V_{CE}=5V, I_C=10mA$
$V_{CE(sat)}$	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	1.9	4.0	V	$V_{CE}=0.3V, I_C=20mA$
R1	Input Resistor	3.3	4.7	6.1	Kohm	
R2/R1	Resistance Ratio	0.9	1.0	1.1		
f _r	Current Gain-Bandwidth Product		250		MHz	$V_{CE}=10V, I_C=5mA$
C _{ob}	Output Capacitance		3.7		pF	$V_{CB}=10V, f=1MHz$



●Equivalent circuit

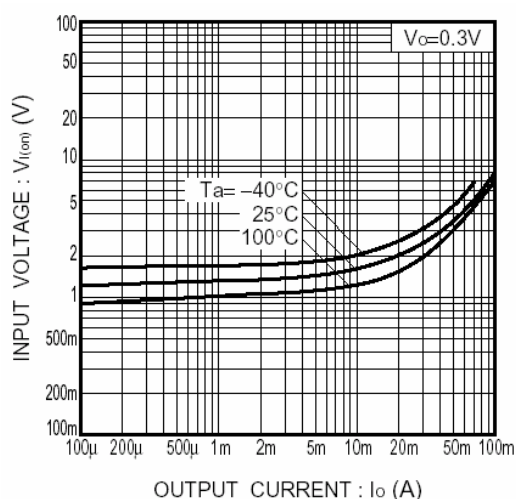
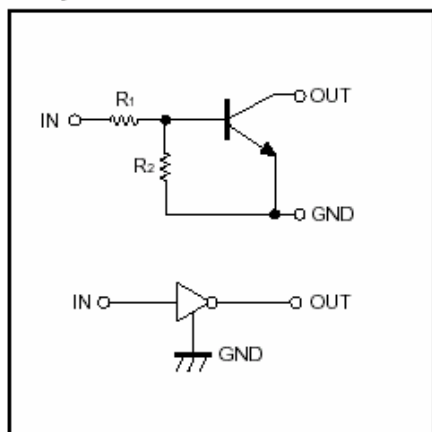


Fig.1 Input voltage vs. output current (ON characteristics)

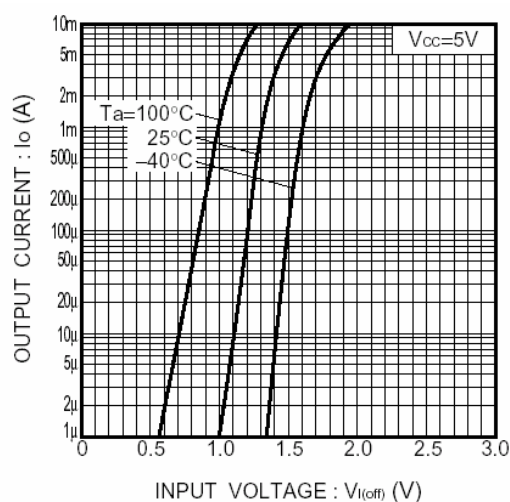


Fig.2 Output current vs. input voltage (OFF characteristics)

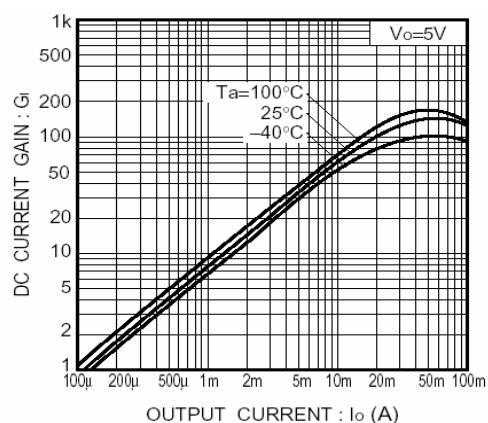


Fig.3 DC current gain vs. output current

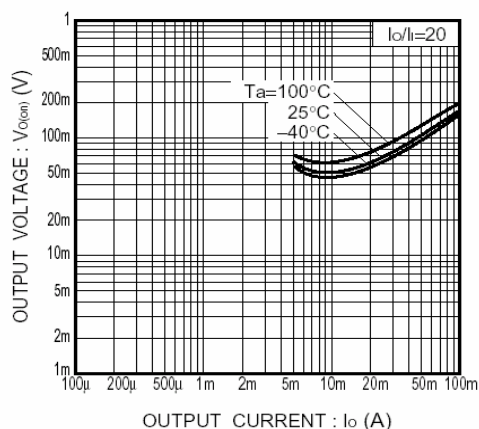


Fig.4 Output voltage vs. output current