



Shantou Huashan Electronic Devices Co.,Ltd.

PNP DIGITAL TRANSISTOR

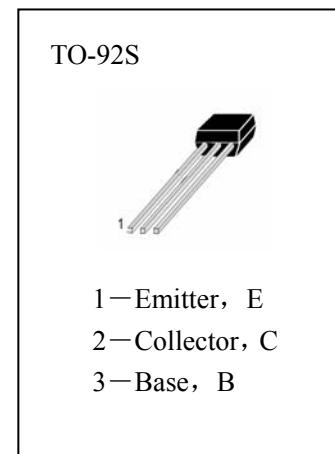
**HA114T**

## ■ APPLICATIONS

Switching Circuit, Interface Circuit.

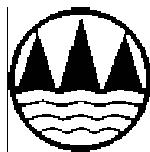
## ■ ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )

$T_{stg}$ —Storage Temperature..... -55~150°C  
 $T_j$ —Junction Temperature..... 150°C  
 $P_C$ —Collector Dissipation..... 300mW  
 $V_{CBO}$ —Collector-Base Voltage..... -50V  
 $V_{CEO}$ —Collector-Emitter Voltage..... -50V  
 $V_{EBO}$ —Emitter-Base Voltage..... -5V  
 $I_C$ —Collector Current..... -100mA



## ■ ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ )

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
$BV_{CBO}$	Collector-Base Breakdown Voltage	-50			V	$I_C=-50 \mu\text{A}, I_E=0$
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	-50			V	$I_C=-1\text{mA}, I_B=0$
$BV_{EBO}$	Emitter-Base Breakdown Voltage	-5			V	$I_E=-50 \mu\text{A}, I_C=0$
$I_{CBO}$	Collector Cut-off Current			-0. 5	$\mu\text{A}$	$V_{CB}=-50\text{V}, I_E=0$
$I_{EBO}$	Emitter Cut-off Current			-0. 5	$\mu\text{A}$	$V_{EB}=-4\text{V}, I_C=0$
$HFE$	DC Current Gain	100	250	600		$V_{CE}=-5\text{V}, I_C=-1\text{mA}$
$V_{CE(sat)}$	Collector- Emitter Saturation Voltage			-0. 3	V	$I_C=-10\text{mA}, I_B=-1\text{mA}$
$V_I$ (off)	Input Off Voltage	-0. 4	-0. 55	-0. 8	V	$V_{CE}=-5\text{V}, I_C=-0.1\text{mA}$
$V_I$ (on)	Input On Voltage	-0. 7	-1. 2	-3. 0	V	$V_{CE}=-0.2\text{V}, I_C=-10\text{mA}$
$R_I$	Input Resistor	7. 0	10	13	$\text{K}\Omega$	
$f_T$	Current Gain-Bandwidth Product		250		MHz	$V_{CE}=-10\text{V}, I_C=-5\text{mA}$
$C_{ob}$	Output Capacitance		3. 7		pF	$V_{CB}=-10\text{V}, f=1\text{MHz}$



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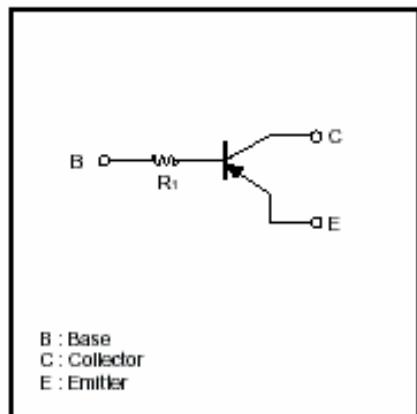


Fig1. DC Current Gain

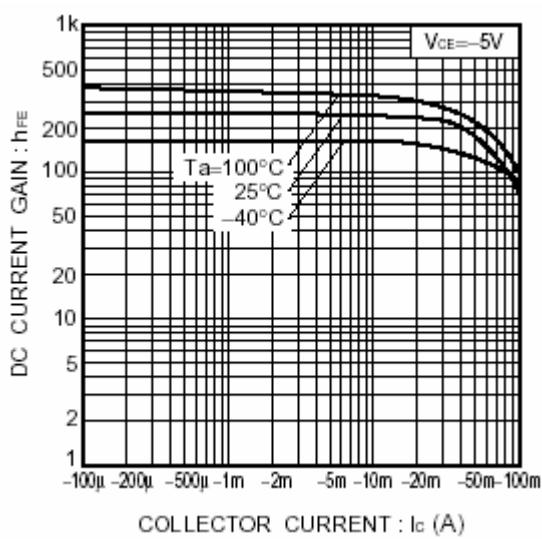


Fig2. Collector-Emitter Saturation Voltage

