



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..... $-55\sim 150^{\circ}\text{C}$

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

TO-92S



1—Emitter, E

2—Collector, C

3—Base, B

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	μA	$V_{\text{CB}}=-50\text{V}$, $I_E=0$
I_{EBO}	Emitter Cut-off Current			-0.5	μA	$V_{\text{EB}}=-4\text{V}$, $I_C=0$
H_{FE}	DC Current Gain	100	250	600		$V_{\text{CE}}=-5\text{V}$, $I_C=-1\text{mA}$
$V_{\text{CE(sat)}}$	Collector- Emitter Saturation Voltage			-0.3	V	$I_C=-10\text{mA}$, $I_B=-1\text{mA}$
$V_{\text{I(off)}}$	Input Off Voltage	-0.4	-0.55	-0.8	V	$V_{\text{CE}}=-5\text{V}$, $I_C=-0.1\text{mA}$
$V_{\text{I(on)}}$	Input On Voltage	-0.7	-1.2	-3.0	V	$V_{\text{CE}}=-0.2\text{V}$, $I_C=-10\text{mA}$
R_{I}	Input Resistor	7.0	10	13	$\text{K}\Omega$	
f_{T}	Current Gain-Bandwidth Product		250		MHz	$V_{\text{CE}}=-10\text{V}$, $I_C=-5\text{mA}$
C_{ob}	Output Capacitance		3.7		pF	$V_{\text{CB}}=-10\text{V}$, $f=1\text{MHz}$

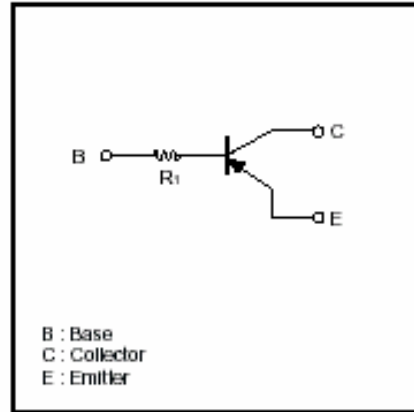
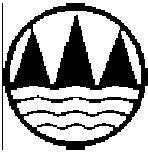


Fig1. DC Current Gain

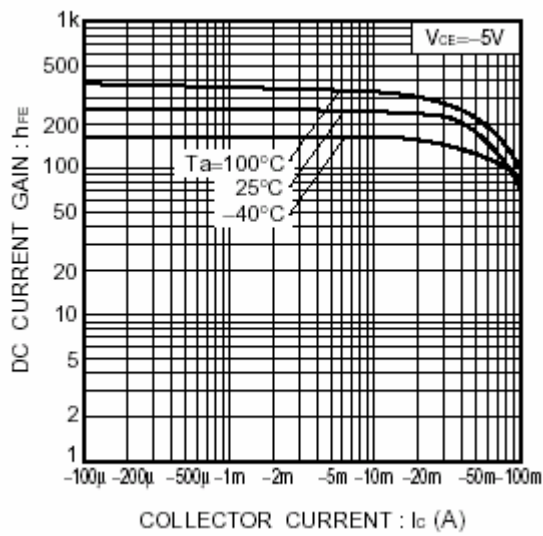


Fig2. Collector-Emitter Saturation Voltage

