Shantou Huashan Electronic Devices Co.,Ltd.

PNP DIGITAL TRANSISTOR

HA143E

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

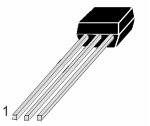
V_{CBO}——Collector-Base Voltage·····-50V

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=-10μA, 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
VI (off)	Input Off Voltage	-0.8	-1.1	-1.5	V	V_{CE}=-5V, I_C=-0.1mA
VI (on)	Input On Voltage	-1.0	-1.9	-4.0	V	V_{CE}=-0.2V, I_C=-20mA
R1	Input Resistor	3.3	4.7	6.1	Kohm	
R2/R1	Resistance Ratio	0.9	1.0	1.1		
fr	Current Gain-Bandwidth Product		250		MHz	V_{CE}=-10V,I_C=-5mA
Cob	Output Capacitance		3.7		pF	V_{CB}=-10V,f=1MHz

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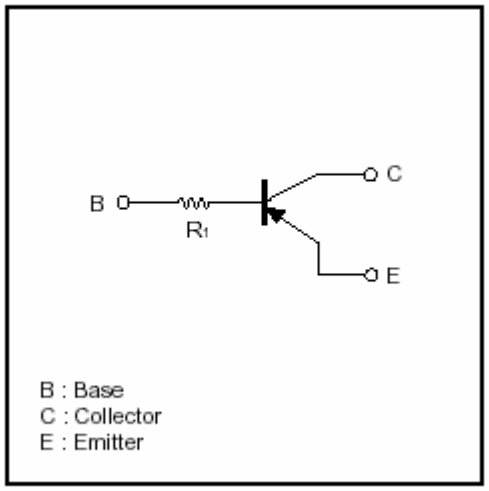
●Equivalent circuit



●Electrical characteristic curves

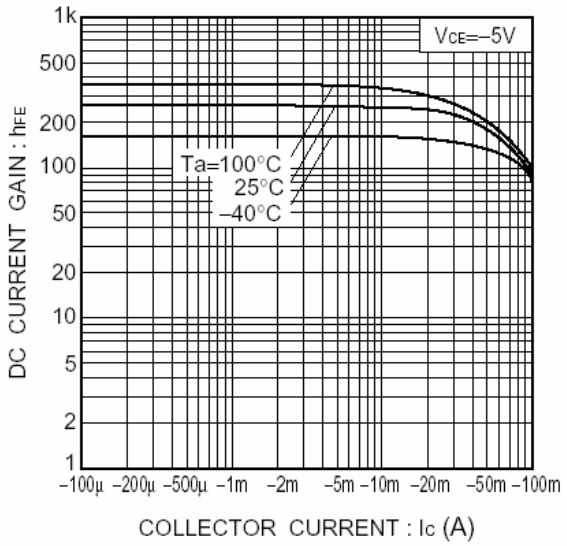


Fig.1 DC current gain vs. collector current

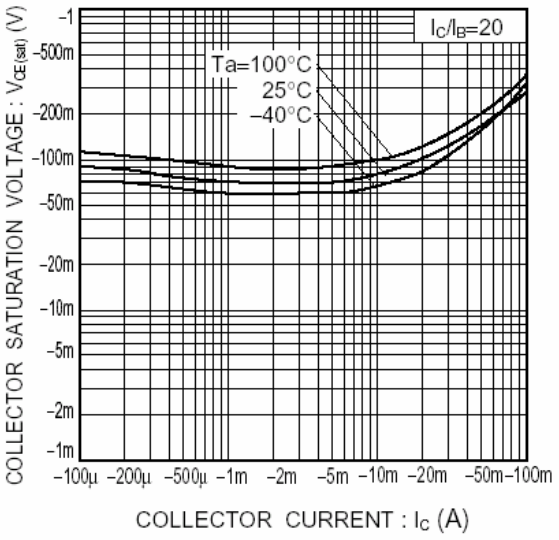


Fig.2 Collector-emitter saturation voltage vs. collector current