



Shantou Huashan Electronic Devices Co.,Ltd.

NPN SILICON TRANSISTOR

HE13001

HIGH VOLTAGE SWITCH MODE APPLICATIONS

High Speed Switching

Suitable for Switching Regulator and Monitor Control

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..... 900mW

V_{CBO} —Collector-Base Voltage..... 600V

V_{CEO} —Collector-Emitter Voltage..... 400V

V_{EBO} —Emitter-Base Voltage..... 9V

I_C —Collector Current..... 0.25A

TO-92



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	600			V	$I_C=1\text{mA}$, $I_E=0$
BV_{CEO}	Collector-Emitter Breakdown Voltage	400			V	$I_C=10\text{mA}$, $I_B=0$
BV_{EBO}	Emitter-Base Breakdown Voltage	9			V	$I_E=1\text{mA}$, $I_C=0$
I_{CBO}	Collector Cut-off Current			100	μA	$V_{\text{CB}}=500\text{V}$, $I_E=0$
I_{EBO}	Emitter-Base Cut-off Current			100	μA	$V_{\text{EB}}=9\text{V}$, $I_C=0$
H_{FE}	DC Current Gain	8		70		$V_{\text{CE}}=10\text{V}$, $I_C=20\text{mA}$
$V_{\text{CE(sat)}}$	Collector- Emitter Saturation Voltage			0.6	V	$I_C=100\text{mA}$, $I_B=20\text{mA}$
$V_{\text{BE(sat)}}$	Base-Emitter Saturation Voltage			1.2	V	$I_C=100\text{mA}$, $I_B=20\text{mA}$
f_T	Current Gain-Bandwidth Product	8			MHz	$V_{\text{CE}}=10\text{V}$, $I_C=20\text{mA}$