Shantou Huashan Electronic Devices Co.,Ltd.

NPN SILICON TRANSISTOR

HE13003

HIGH VOLTAGE SWITCH MODE APPLICATIONS

High Speed Switching

Suitable for Switching Regulator and Montor Control

ABSOLUTE MAXIMUM RATINGS (T_a=25℃)

T_{stg}——Storage Temperature····· -65~150℃

T_j——Junction Temperature····· 150℃

P_C——Collector Dissipation (T_c=25℃) ····· 50W

V_{CBO}——Collector-Base Voltage····· 700V

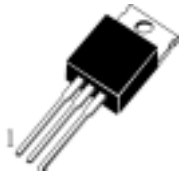
V_{CEO}——Collector-Emitter Voltage····· 400V

V_{EBO}——Emitter-Base Voltage····· 9V

I_C——Collector Current (DC) ····· 1.5A

I_B——Base Current·····0.75A

TO-220



1—Base，B

2—Collector，C

3—Emitter, E

ELECTRICAL CHARACTERISTICS (T_a=25℃)

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BV_{CEO}	Collector-Emitter Breakdown Voltage	400			V	I_C=5mA, I_B=0
I_{EBO}	Emitter-Base Cut-off Current			10	μA	V_{EB}=9V, I_C=0
H_{FE} (1)	DC Current Gain	10		40		V_{CE}=5V, I_C=0.5A
H_{FE} (2)		5				V_{CE}=2V, I_C=1A
$V_{CE(sat)1}$	Collector- Emitter Saturation Voltage			0.5	V	I_C=0.5A, I_B=0.1A
$V_{CE(sat)2}$				1	V	I_C=1A, I_B=0.25A
$V_{CE(sat)3}$				3	V	I_C=1.5A, I_B=0.5A
$V_{BE(sat)1}$	Base-Emitter Saturation Voltage			1	V	I_C=0.5A, I_B=100mA
$V_{BE(sat)2}$				1.2	V	I_C=1A, I_B=0.25A
f_T	Current Gain-Bandwidth Product	5			MHz	V_{CE}=10V,I_C=0.1A,f=1MHz
t_{ON}	Turn On Time			1.1	μs	V_{CC}=125V, I_C=1A,
t_{STG}	Storage Time			4.0	μs	I_{B1}=0.2A,I_{B2}=-0.2A
t_F	Fall Time			0.7	μs	R_L=125Ω

h_{FE} Classification

H1	H2	H3	H4	H5
10-16	14-21	19-26	24-31	29-40