Shantou Huashan Electronic Devices Co.,Ltd.

NPN SILICON TRANSISTOR

HS13003

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……30W

V_{CBO}——Collector-Base Voltage……600V

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

V_{EBO}——Emitter-Base Voltage……9V

I_C——Collector Current……1.5A

1—Base，B

2—Collector，C

3— Emitter，E

ELECTRICAL CHARACTERISTICS（T_a=25℃）

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BV_{CBO}	Collector-Base Breakdown Voltage	600			V	I_C=1mA, I_E=0
BV_{CEO}	Collector-Emitter Breakdown Voltage	400			V	I_C=10mA, I_B=0
BV_{EBO}	Emitter-Base Breakdown Voltage	9			V	I_E=1mA， I_C=0
H_{FE}	DC Current Gain	10		40		V_{CE}=10V, I_C=0.1A
$V_{CE(sat)1}$	Collector- Emitter Saturation Voltage			0.8	V	I_C=1A, I_B=500mA
$V_{CE(sat)2}$	Collector- Emitter Saturation Voltage			0.8	V	I_C=0.5A, I_B=100mA
$V_{BE(sat)}$	Base-Emitter Saturation Voltage			1.2	V	I_C=0.5A, I_B=100mA
I_{CBO}	Collector Cut-off Current			10	μA	V_{CB}=500V, I_E=0
I_{EBO}	Emitter-Base Cut-off Current			10	μA	V_{EB}=9V, I_C=0
f_T	Current Gain-Bandwidth Product	8			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