Shantou Huashan Electronic Devices Co.,Ltd.

NPN SILICON TRANSISTOR

KSH13007W

HIGH VOLTAGE SWITCH MODE APPLICATION

ABSOLUTE MAXIMUM RATINGS（T_a=25℃）

T_{stg}——Storage Temperature····· −55~150℃

T_j——Junction Temperature····· 150℃

P_C——Collector Dissipation（T_c=25℃）····· 80W

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

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

V_{EBO}——Emitter-Base Voltage····· 9V

I_C——Collector Current（DC）····· 8A

I_C——Collector Current（Pulse）····· 16A

I_B——Base Current·····4A

TO-263（D2PAK）

1－Base，B
2－Collector，C
3－Emitter, E

电参数（T_a=25℃）

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BVCEO	Collector-Emitter Sustaining Voltage	400			V	I_C=10mA, I_B=0
IEBO	Emitter-Base Cutoff Current			1	mA	V_{EB}=9V, I_C=0
HFE（1）	DC Current Gain	10		40		V_{CE}=5V, I_C=2A
HFE（2）		5		30		V_{CE}=5V, I_C=5A
VCE(sat1)	Collector- Emitter Saturation Voltage			1	V	I_C=2A, I_B=400mA
VCE(sat2)				2	V	I_C=5A, I_B=1A
VCE(sat3)				3	V	I_C=8A, I_B=2A
VBE(sat1)	Base- Emitter Saturation Voltage			1.2	V	I_C=2A, I_B=0.4A
VBE(sat2)				1.6	V	I_C=5A, I_B=1A
Cob	Output Capacitance		110		pF	V_{CB}=10V, f=0.1MHz z
f_T	Current Gain-Bandwidth Product	4				V_{CE}=10V, I_C=500mA
tON	Turn On time			1.6	uS	Vcc=125V,Ic=5A I_{B1}=I_{B2}=1A
tSTG	Storage Time			3	uS	
tF	Fall Time			0.7	uS	

hFE Classification

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

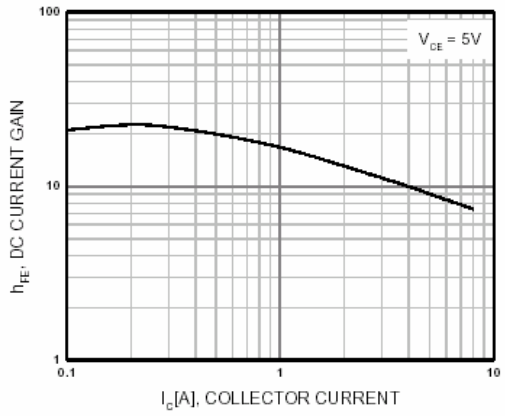

Figure 1. DC current Gain

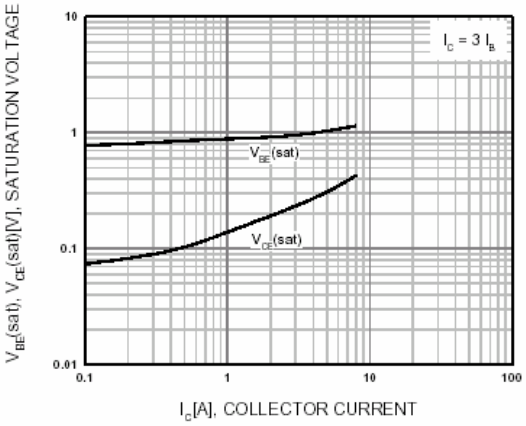

Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

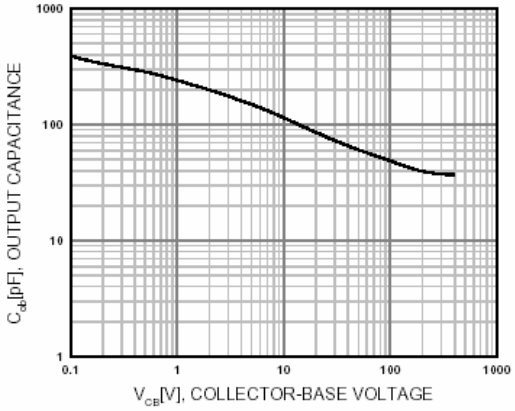

Figure 3. Collector Output Capacitance

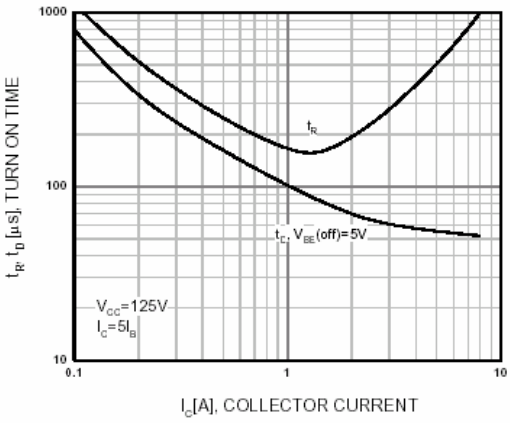

Figure 4. Turn On Time

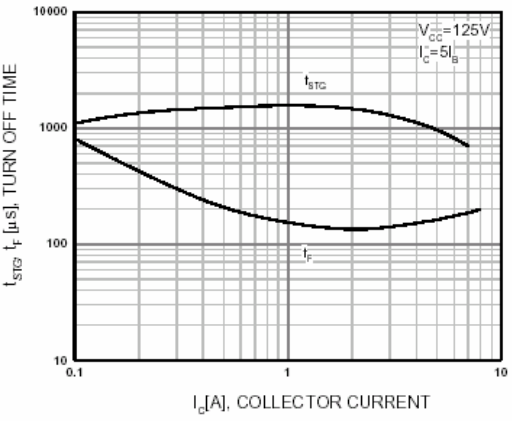

Figure 5. Turn Off Time

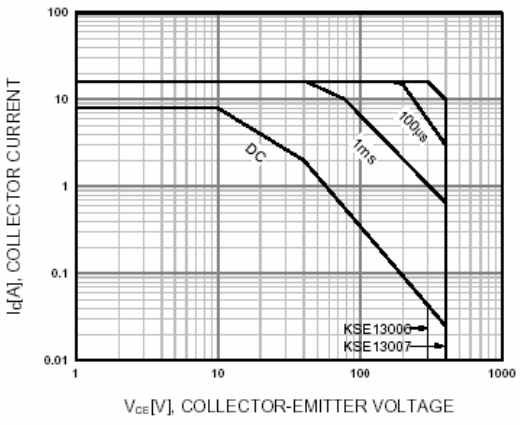

Figure 6. Safe Operating Area

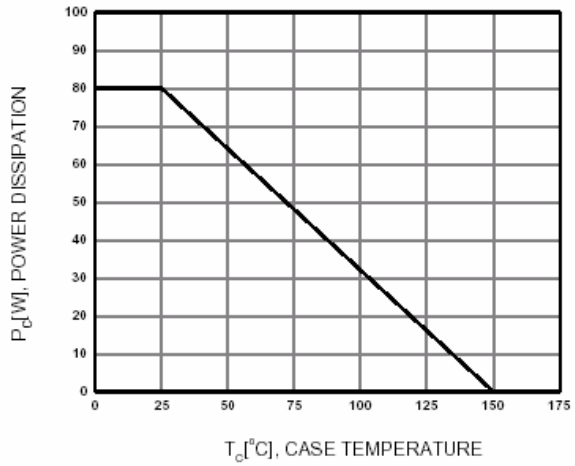

Figure 7. Power Derating