



KSH13005W

■ HIGH VOLTAGE SWITCH MODE APPLICATION

High Speed Switching
 Suitable for Switching Regulator and Motor Control

■ ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

- T_{stg}—Storage Temperature..... -55~150°C
- T_j—Junction Temperature..... 150°C
- P_C—Collector Dissipation (T_c=25°C) 75W
- V_{CBO}—Collector-Base Voltage..... 700V
- V_{CEO}—Collector-Emmitter Voltage..... 400V
- V_{EBO}—Emmitter-Base Voltage..... 9V
- I_C—Collector Current(DC)..... 4A
- I_C—Collector Current (Pulse) 8A
- I_B—Base Current.....2A

TO-263 (D2PAK)



- 1—Base, B
- 2—Collector, C
- 3—Emmitter, E

■ 电参数 (T_a=25°C)

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BV _{CEO}	Collector-Emmitter Sustaining Voltage	400			V	I _C =10mA, I _B =0
I _{EBO}	Emmitter-Base Cut-off Current			1	mA	V _{EB} =9V, I _C =0
H _{FE}	DC Current Gain	10		40		V _{CE} =5V, I _C =1A
		8		40		V _{CE} =5V, I _C =2A
V _{CE(sat)}	Collector- Emmitter Saturation Voltage			0.5	V	I _C =1A, I _B =0.2A
				0.6	V	I _C =2A, I _B =0.5A
				1	V	I _C =4A, I _B =1A
V _{BE(sat)}	Base- Emmitter Saturation Voltage			1.2	V	I _C =1A, I _B =0.2A
				1.6	V	I _C =2A, I _B =0.5A
C _{ob}	Output Capacitance		65		pF	V _{CB} =10V, f=0.1MHz
f _T	Current Gain-Bandwidth Product	4			MHz	V _{CE} =10V, I _C =0.5A
t _{ON}	Turn On Time			0.8	μs	V _{CC} =125V, I _C =2A, I _{B1} =-I _{B2} =0.4A
t _S	Storage Time			4	μs	
t _F	Fall Time			0.9	μs	

h_{FE} classification: H1 (10--16) H2 (14--21) H3 (19--26) H4 (24--31) H5 (29--40)

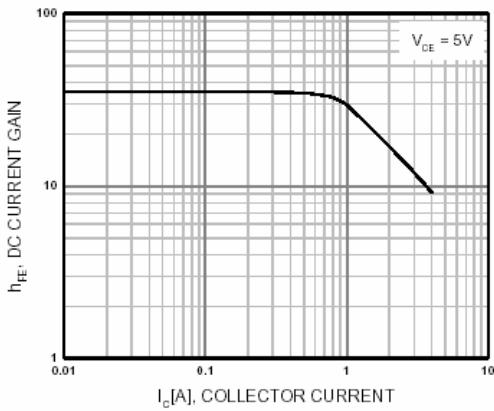


Figure 1. DC current Gain

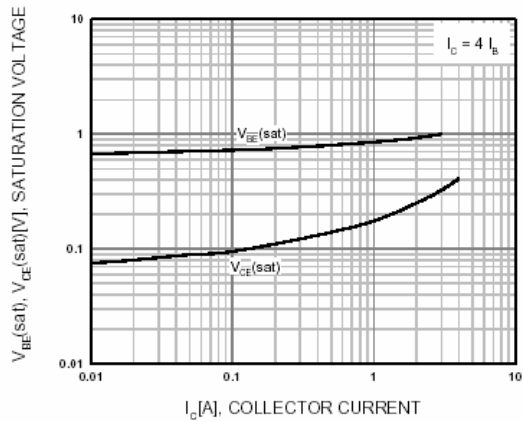


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

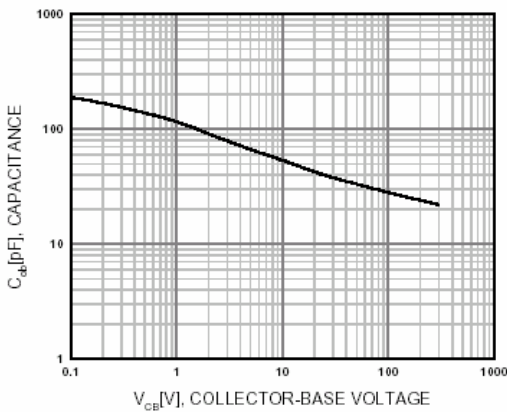


Figure 3. Collector Output Capacitance

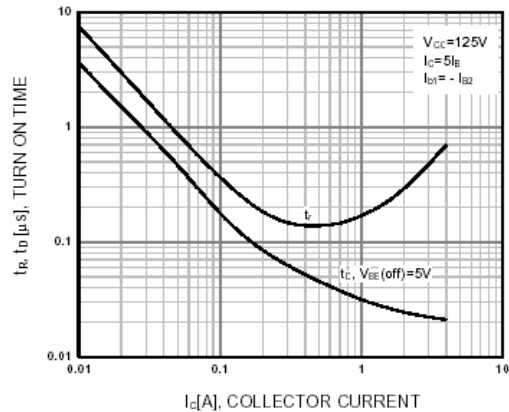


Figure 4. Turn On Time

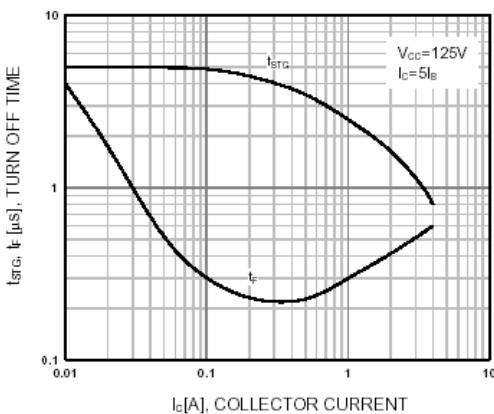


Figure 5. Turn Off Time

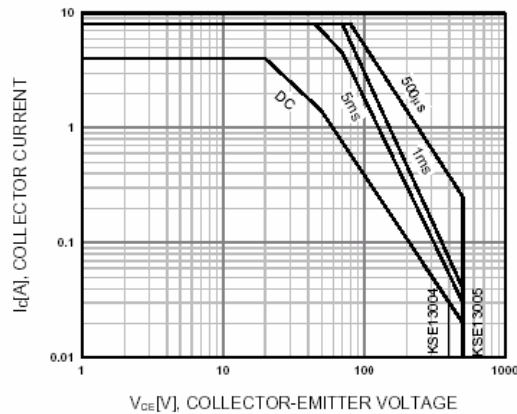


Figure 6. Safe Operating Area



Shantou Huashan Electronic Devices Co.,Ltd.

NPN SILICON TRANSISTOR

KSH13005W

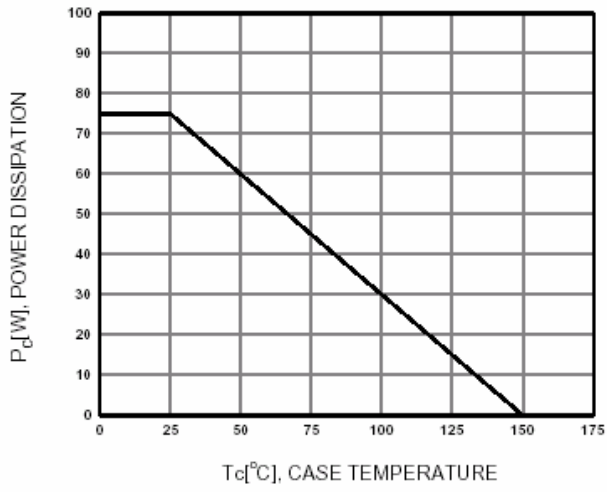


Figure 7. Power Derating