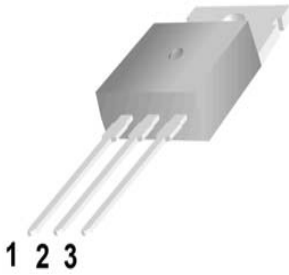


Model: 13005D

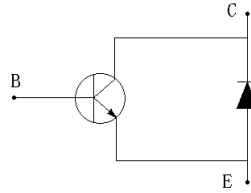
Appearance: TO-220

Product name: Silicon NPN high voltage rate switching transistor

Polarity: Three pins from left to right 1: B (base) 2: C (collector) 3: E (emitter)



Uses: Mainly used in energy-saving lamps, rectifiers, and other switches, oscillating circuits



Limit range (TA=25 ° C unless otherwise specified)

Project	Symbol	Rated value	Unit
Collector-emitter voltage (IB=0)	V _{CEO}	400	V
Collector-base voltage	V _{CBO}	700	V
Emitter-base voltage	V _{EBO}	9	V
Collector current	I _c	4	A
Collector dissipation power	P _c	2	W
Junction temperature	T _{jm}	150	°C
Storage temperature	T _{stg}	-55~+150	°C

Electrical parameter characteristics (TA=25 ° C unless otherwise specified)

Project	Symbol	Test conditions	Min value	Typical	Max value	Unit
Collector-base breakdown voltage	V _{CBO}	I _c =0.1mA	700			V
Collector-emitter voltage	V _{CEO}	I _c =1mA	400			V
Emitter-base breakdown voltage	V _{EBO}	I _c =0.1mA	9			V
Collector-base cutoff current	I _{CBO}	V _{CB} =670V, I _E =0			1	uA
Emitter-base cut-off current	I _{EBO}	V _{EB} =9V, I _c =0			1	uA
Collector-emitter saturation voltage	V _{CEsat}	I _c =2A, I _B =500mA			0.6	V
Base-emitter saturation voltage	V _{BESat}	I _c =2A, I _B =500mA			1.2	V
Current amplification	H _{FE}	V _{CE} =5V, I _c =0.5A	15		30	
Storage time	T _s	I _C =0.5A	2		5	uS
Characteristic frequency	f _T	V _{CE} =10V, I _C =0.5A f=1MHz	5			MHz

Typical characteristic curves

Fig1 SOA (DC)

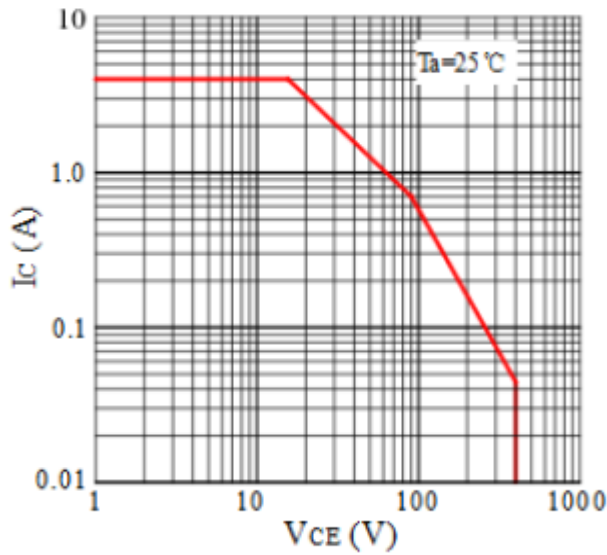


Fig2 Ptot - T

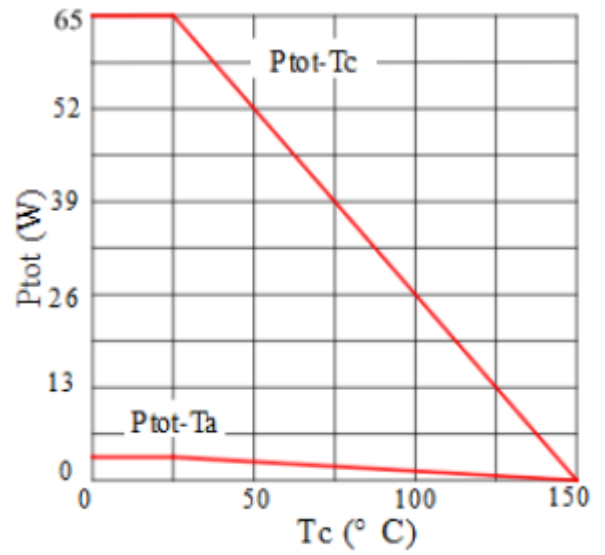


Fig3 Static Characteristic

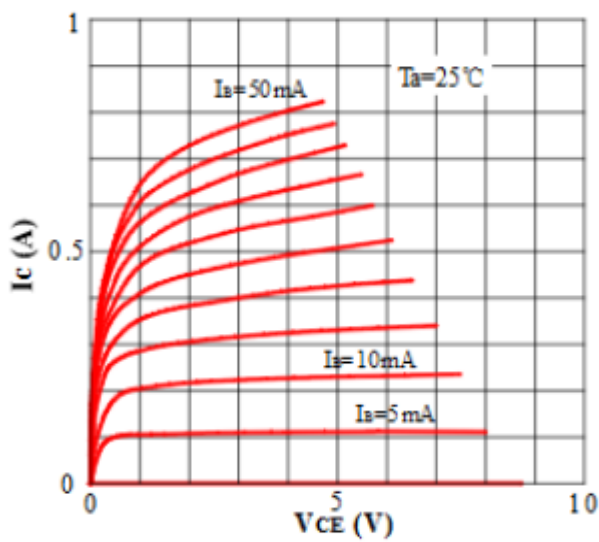


Fig4 hFE-Ic

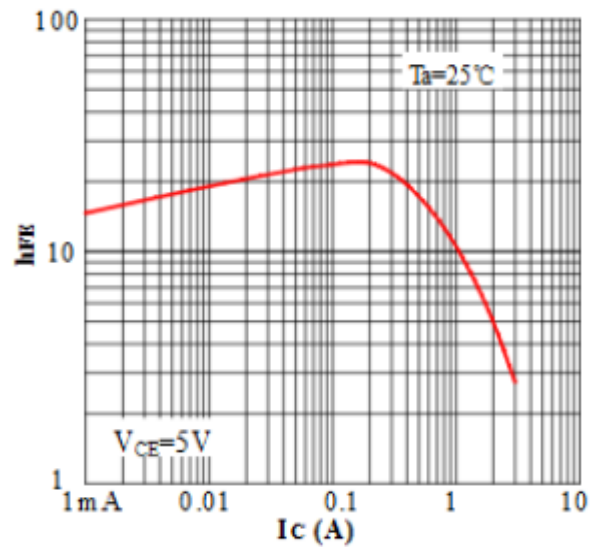


Fig5 VCESat-Ic

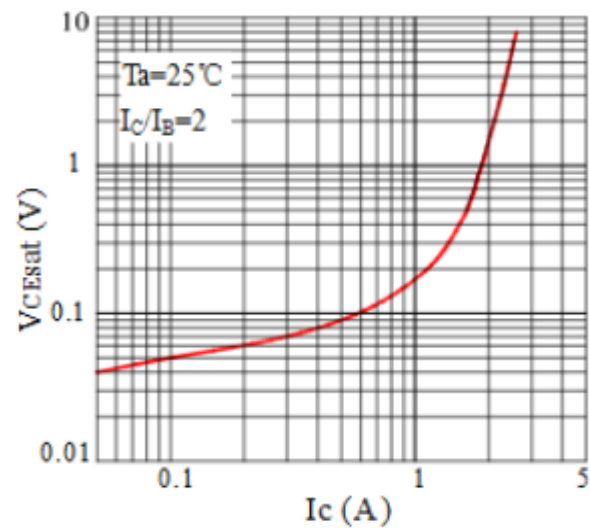


Fig6 VBESat-Ic

