HK13003E

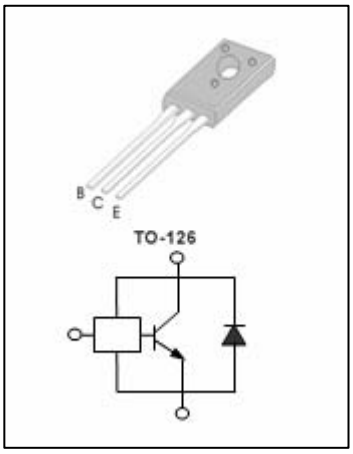
HIGH VOLTAGE FAST-SWITCHING NPN POWER TRANSISTOR

● **FEATURES**：■HIGH VOLTAGE CAPABILITY ■HIGH SPEED SWITCHING ■WIDE SOA

● **APPLICATION:** ■FLUORESCENT LAMP ■ELECTRONIC BALLAST

Absolute Maximum Ratings

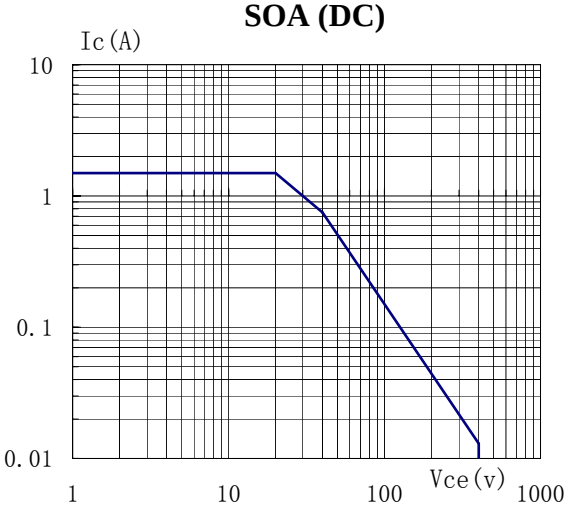
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	700	V
Collector-Emitter Voltage	V_{CEO}	480	V
Emitter- Base Voltage	V_{EBO}	9	V
Collector Current	I_C	1.5	A
Total Power Dissipation	P_C	30	W
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-65-150	°C



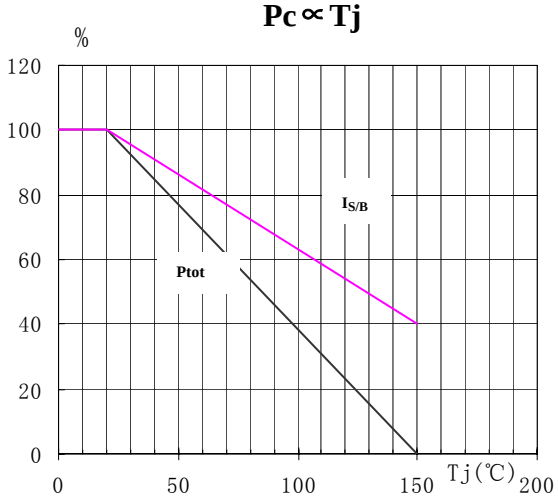
Electronic Characteristics (Tj=25°C Unless OtherWise Specified)

Parameter	Symbol	Test Conditons	Min	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=1mA, I_E=0	700		V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C =10mA, I_B=0	480		V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=1mA, I_C=0	9		V
Collector-Base Cutoff Current	I_{CBO}	V_{CB}=600V,I_E=0		10	μA
Collector-Emitter Cutoff Current	I_{CEO}	V_{CE}=400V, I_B=0		20	μA
Emitter –Base Cutoff Current	I_{EBO}	V_{EB}=9V, I_C=0		20	μA
DC Current Gain	$h_{FE(1)}$	V_{CE} =5V, I_C =200mA	15	30	
DC Current Gain	$h_{FE(2)}$	V_{CE} =5V, I_C =5mA	10		
Collector-Emitter Saturation Voltage	V_{CESAT}	I_C =1.2A, I_B =0.3A		1.2	V
Base-Emitter Saturation Voltage	V_{BESAT}	I_C =1.2A, I_B =0.3A		1.3	V
Storage Time	t_s	UI9600 I_C =0.25A	1.5	3.5	μs
Falling Time	t_f			1.0	μs

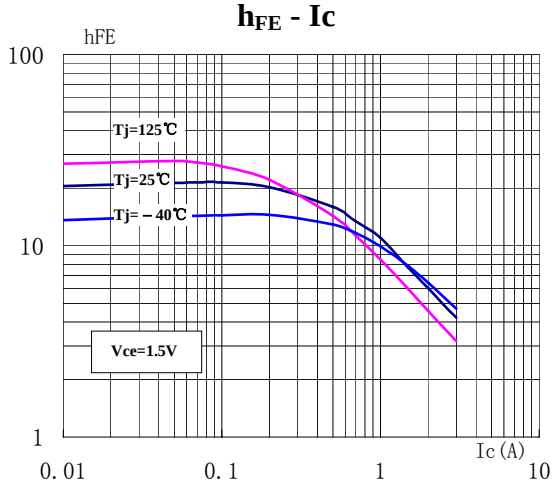
SOA (DC)



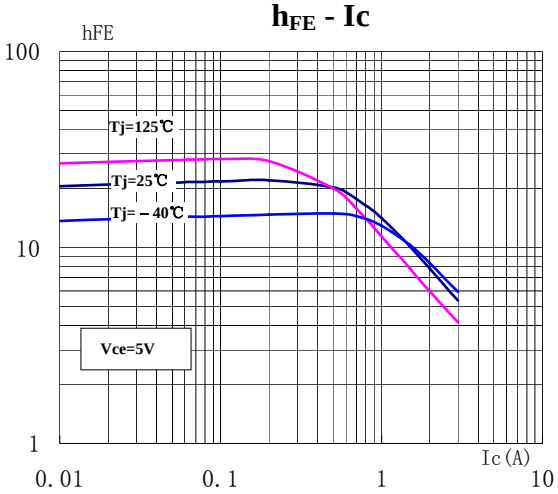
Pc∝Tj



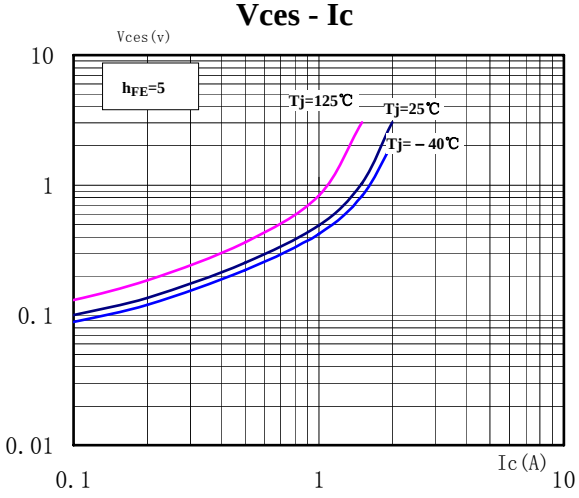
h_{FE} - Ic



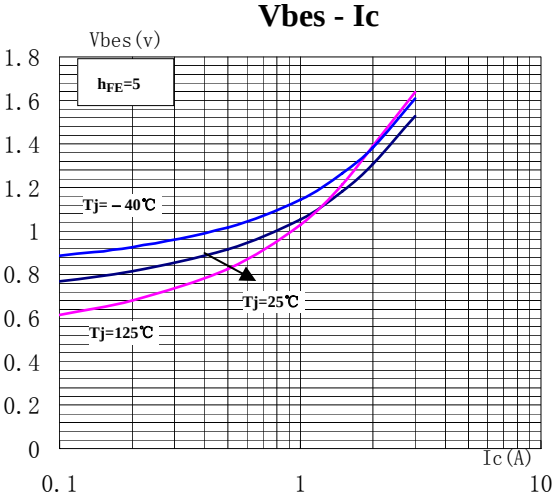
h_{FE} - Ic



Vces - Ic



Vbes - Ic



TO-126 MECHANICAL DATA

UNIT：mm

SYMBOL	min	nom	max	SYMBOL	min	nom	max
A	2.3		2.8	L	15.3		16.5
B	1.0		1.2	L1			2.54
B1	0.8		1.0	ϕP	3.0		3.2
b	0.65		0.88	ϕP1		5.0	
c	0.36		0.60	Q	3.6		4.4
D	10.5		11.1	Q1	0.9		1.5
E	7.2		7.8	R		0.5*	
e		2.29