Suntac ELECTRONIC CORP

STC13003

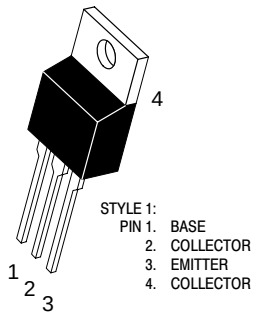
NPN POWER TRANSISTORS

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

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

● Absolute Maximum Ratings（Tc=25°C） TO-220

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	600	V
Collector-Emitter Voltage	V_{CEO}	450	V
Emitter- Base Voltage	V_{EBO}	9	V
Collector Current	I_C	2.0	A
Total Power Dissipation	P_C	50	W
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-65-150	°C

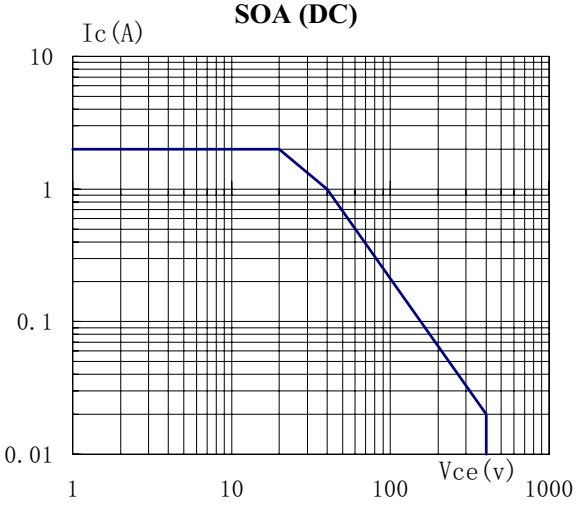


TO-220

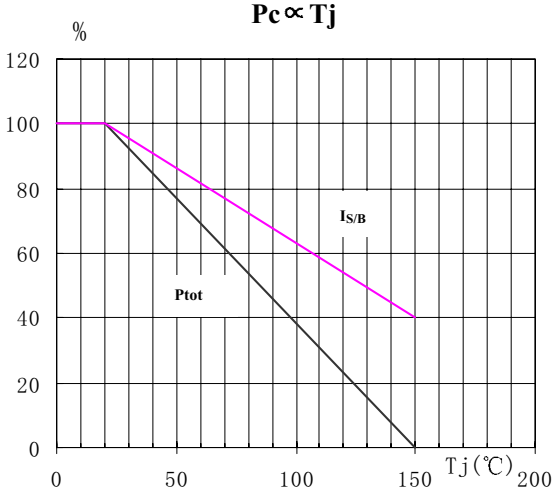
● Electronic Characteristics（Tc=25°C）

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector-Base Cutoff Current	I_{CBO}	V_{CB}=600V		100	μA
Collector-Emitter Cutoff Current	I_{CEO}	V_{CE}=450V,I_B=0		250	μA
Collector-Emitter Voltage	V_{CEO}	I_C=10mA,I_B=0	450		V
Emitter -Base Voltage	V_{EBO}	I_E=1mA,I_C=0	9		V
Collector-Emitter Saturation Voltage	Vces	I_C=0.5A,I_B=0.1A		0.5	V
		I_C=1.0A,I_B=0.2A		0.8	
		I_C=1.5A,I_B=0.5A		1.0	
Base-Emitter Saturation Voltage	Vbes	I_C=0.5A,I_B=0.1A		1.2	V
DC Current Gain	h_{FE}	V_{CE}=5V,I_C=10mA	8		
		V_{CE}=5V,I_C=0.5A	10	40	
		V_{CE}=5V,I_C=1.0A	8		
Storage Time	t_S	V_{CC}=250V, I_C=5I_B I_{B1}= -I_{B2}=0.2A		3	μS
Falling Time	t_f			0.8	

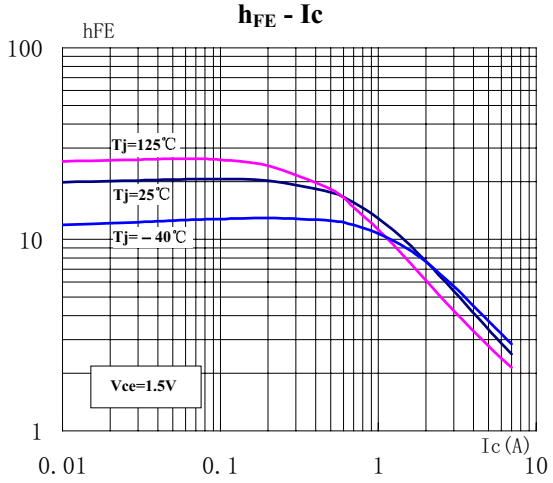
SOA (DC)



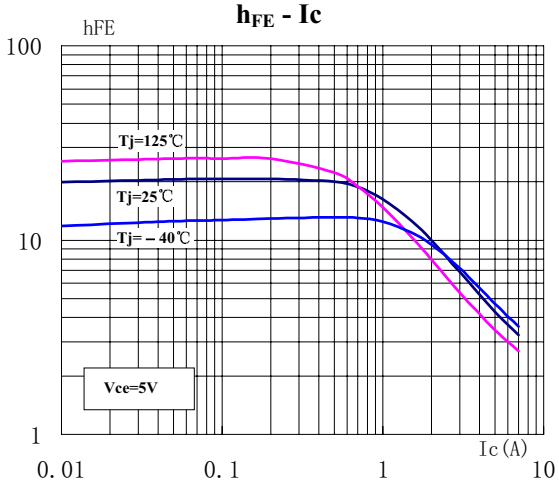
Pc∝Tj



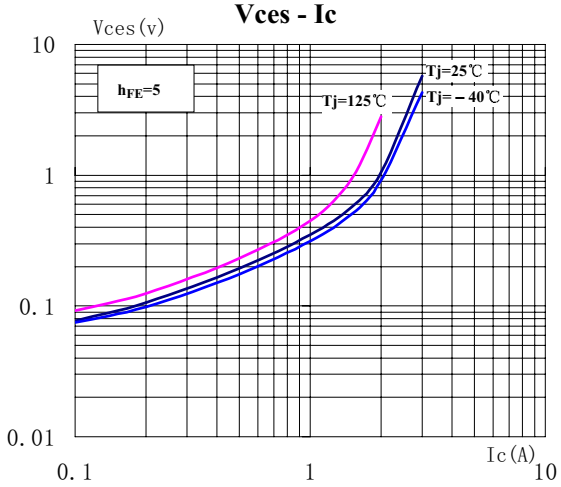
h_{FE} - Ic



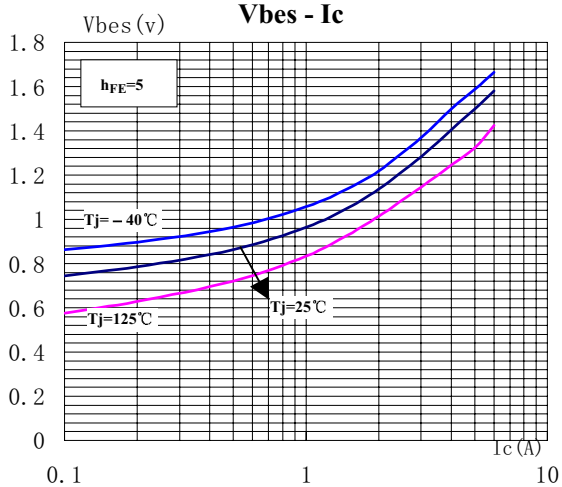
h_{FE} - Ic



Vces - Ic



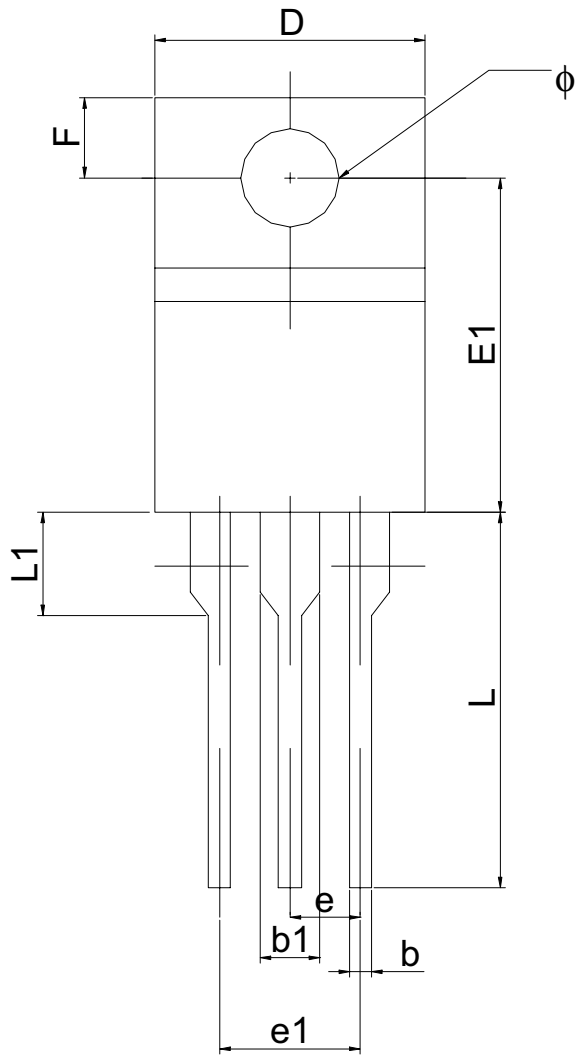
Vbes - Ic



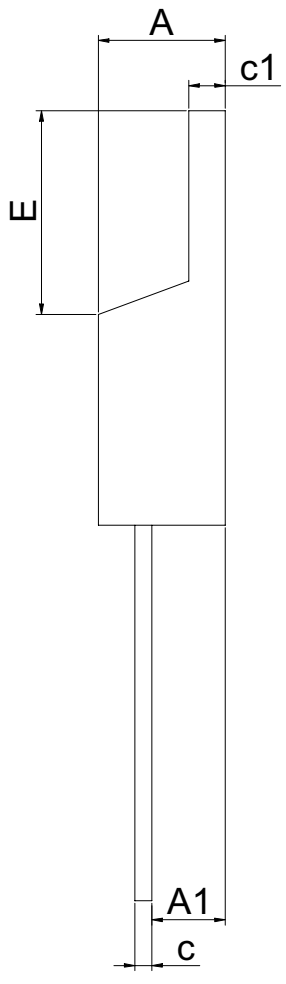
TO-220 MECHANICAL DATA

UNIT：mm

SYMBOL	min	nom	max	SYMBOL	min	nom	max
A	4.47		4.67	e		2.54	
A1	2.52		2.82	e1	4.98		5.18
b	0.71		0.91	F	2.59		2.89
b1	1.17		1.37	L	13.40		13.80
c	0.31		0.53	L1	3.56		3.96
c1	1.17		1.37	ϕ	3.79		3.89
D	10.01		10.31				
E	8.50		8.90				
E1	12.06		12.46				



Front View



Side View