



EB SERIES TRANSISTORS

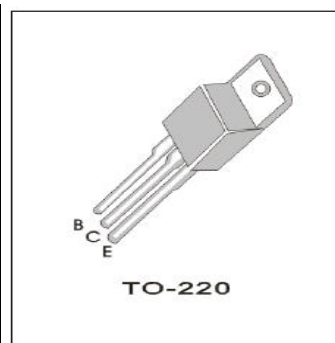
EB13009D

FEATURES : HIGH VOLTAGE CAPABILITY HIGH SPEED SWITCHING WIDE SOA
APPLICATION : FLUORESCENT LAMP ELECTRONIC BALLAST

Absolute Maximum Ratings (Tc=25)

TO-220 NPN

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V _{CB0}	700	V
Collector-Emitter Voltage	V _{CEO}	400	V
Emitter-Base Voltage	V _{EBO}	9	V
Collector Current	I _C	12	A
Total Power Dissipation	P _C	100	W
Junction Temperature	T _j	150	
Storage Temperature	T _{stg}	-65-150	



Electronic Characteristics (Tc=25)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector-Base Cutoff Current	I _{CBO}	V _{CB} =700v		100	μA
Collector-Emitter Cutoff Current	I _{CEO}	V _{CE} =400v		250	μA
Collector-Emitter Voltage	V _{CEO}	I _C =10mA I _B =0	400		V
Emitter-Base Voltage	V _{EBO}	I _E =1mA I _C =0	9		V
Collector-Emitter Saturation Voltage	V _{cesat}	I _C =8.0A I _B =1.6A		0.8	V
		I _C =12A I _B =3A		2.0	V
Base-Emitter Saturation Voltage	V _{besat}	I _C =8.0A I _B =1.6A		1.5	V
DC Current Gain	HFE	V _{CE} =5v I _C =10mA	7		
		V _{CE} =5v I _C =3.0A	10	50	
		V _{CE} =5v I _C =12.0A	5		
Storage Time	T _s	V _{CC} =5V	4.0	10.0	μs
Falling Time	T _f	I _C =0.5A		1.0	μs
Diode Forward Voltage	V _f	I _F =3.0A		2	V

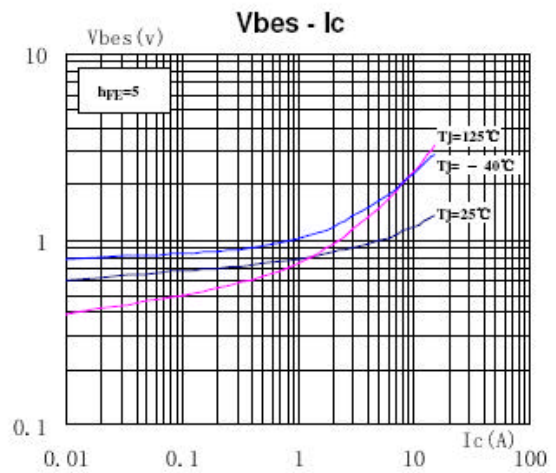
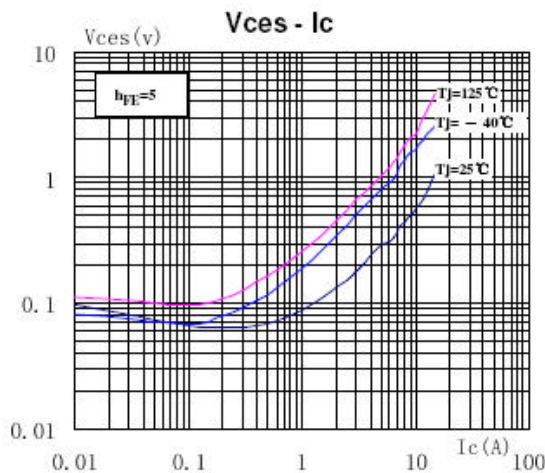
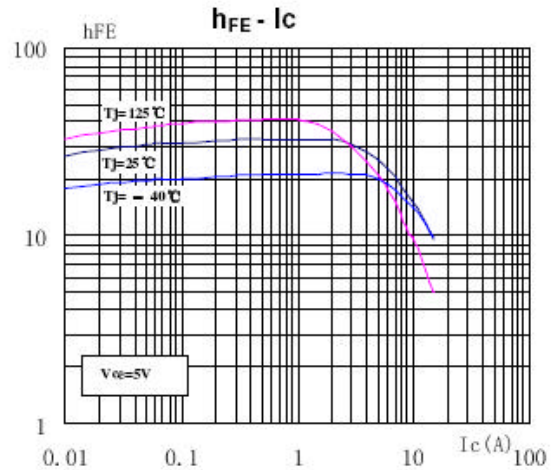
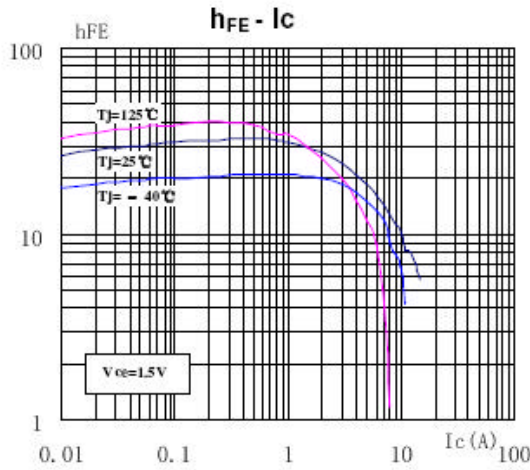
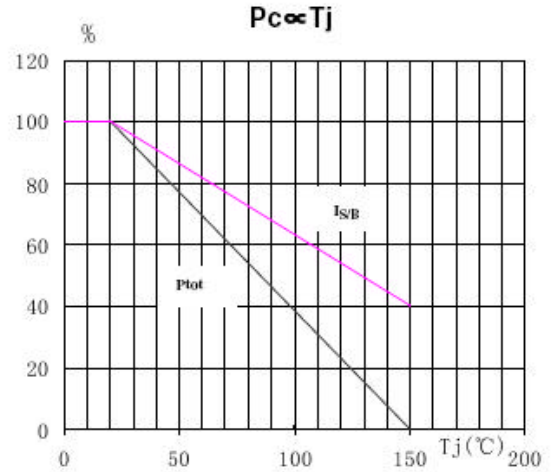
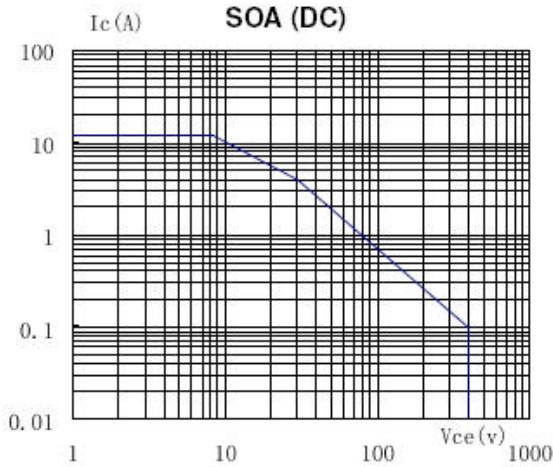
CLASSIFICATION OF HFE AND TS

HFE	15-20	20-25	25-30	30-35	35-40	40-45
TS	4.0-5.0	5.0-6.0	6.0-7.0	7.0-8.0	8.0-9.0	9.0-10.0



EB SERIES TRANSISTORS

EB13009D





EB SERIES TRANSISTORS

EB13009D

TO-220 MECHANICAL DATA

SYMBOL	Min	Nom	Max	SYMBOL	Min	Nom	Max
A	3.5	4.5	5.0	L	12.5	13.5	14.5
B	1.25	1.35	1.5	L1	2.5	3.37	4.5
B1	0.75	0.85	0.955	D1	5.9	6.5	7.1
b	0.6			b			1.2
c	0.35	0.43	0.55	Q	1.5	2.5	3.5
D	14.0	15.5	16.5	Q1	2.0	2.6	3.5
E	9.0	10.0	11.0	Z	3.0	3.8	4.5
e		2.54					

