



SY semiconductors

Shenzhen SY Semiconductors Co., LTD.

## EB SERIES TRANSISTORS

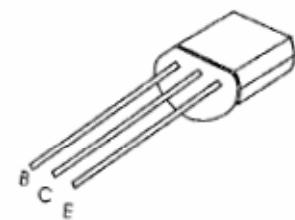
EB203D

- **FEATURES:** ①HIGH VOLTAGE CAPABILITY ②HIGH SPEED SWITCHING ③WIDE SOA
- **APPLICATION:** ①FLUORESCENT LAMP ②ELECTRONIC BALLAST

● Absolute Maximum Ratings ( $T_c=25^\circ\text{C}$ )

TO-92 NPN

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	600	V
Collector-Emitter Voltage	$V_{CEO}$	400	V
Emitter -Base Voltage	$V_{EBO}$	9	V
Collector Current	$I_C$	1.2	A
Total Power Dissipation	$P_C$	13	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-65-150	$^\circ\text{C}$



TO-92

● Electronic Characteristics ( $T_c=25^\circ\text{C}$ )

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector-Base Cutoff Current	$I_{CBO}$	$V_{CB}=600\text{V}$		100	$\mu\text{A}$
Collector-Emitter Cutoff Current	$I_{CEO}$	$V_{CE}=400\text{V}$		250	$\mu\text{A}$
Collector-Emitter Voltage	$V_{CEO}$	$I_C=10\text{mA} I_B=0$	400		V
Emitter -Base Voltage	$V_{EBO}$	$I_E=1\text{mA} I_C=0$	9		V
Collector-Emitter Saturation Voltage	$V_{cesat}$	$I_C=0.5\text{A} I_B=0.1\text{A}$		0.5	V
		$I_C=1\text{A} I_B=0.5\text{A}$		0.6	V
Base-Emitter Saturation Voltage	$V_{besat}$	$I_C=0.5\text{A} I_B=0.1\text{A}$		1.2	V
DC Current Gain	HFE	$V_{CE}=5\text{V} I_C=1\text{mA}$	7		
		$V_{CE}=10\text{V} I_C=0.1\text{A}$	10	40	
		$V_{CE}=5\text{V} I_C=1.2\text{A}$	5		
Storage Time	$T_s$	$V_{CC}=5\text{V}$	1.5	3.5	$\mu\text{s}$
Falling Time	$T_f$			0.8	$\mu\text{s}$
Diode Forward Voltage	$V_f$	$I_F=1.0\text{A}$		2.0	V

## ● CLASSIFICATION OF HFE AND TS

HFE	10-15	15-20	20-25	25-30
TS	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5

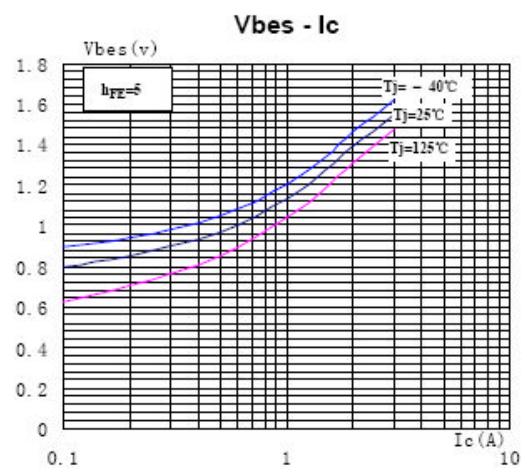
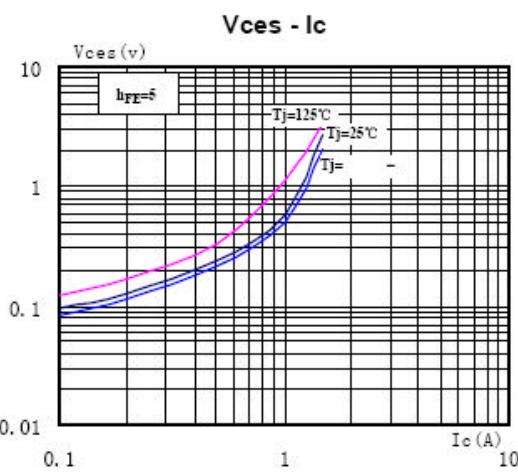
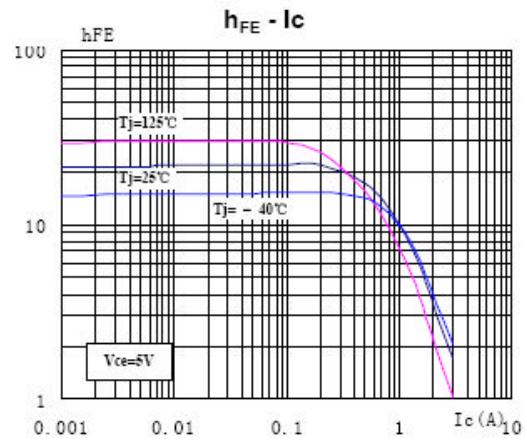
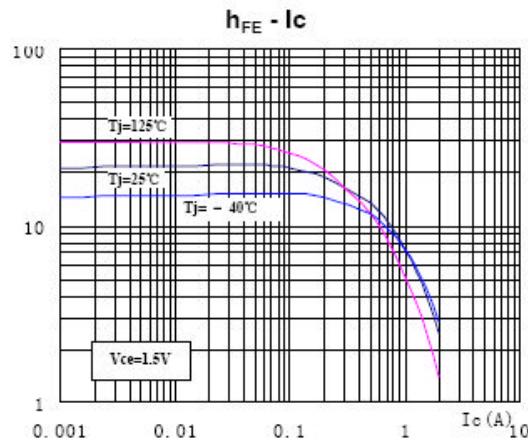
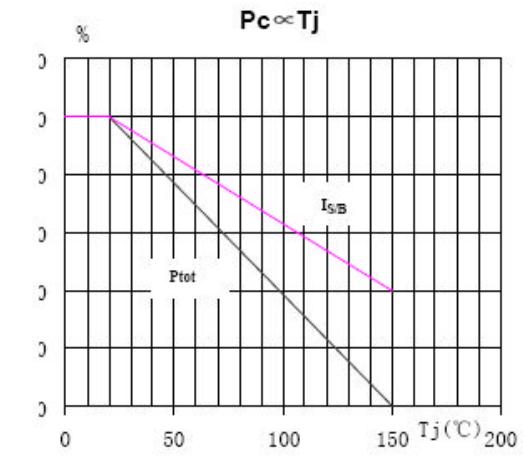
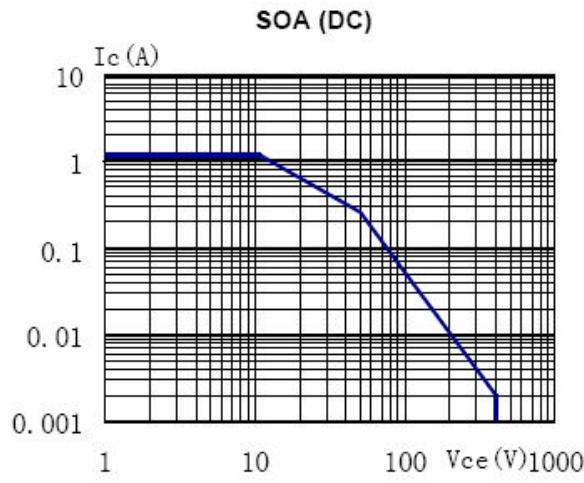


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## TO-92 MECHANICAL DATA

SYMBOL	Min	Nom	Max
A	4.3		5.3
b	0.3		
c	0.3		
D	4.3		5.2
d	1.0		1.7
E	3.2		4.2
e		2.54	
e1		1.27	
L	12.7		
L1			2.0

