

**HK SERIES TRANSISTORS**

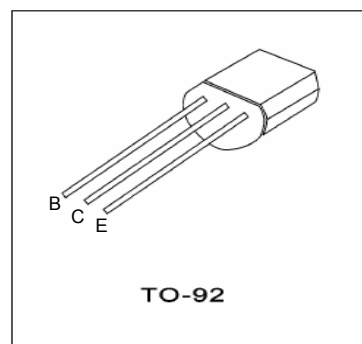
**HK 13001**

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

● Absolute Maximum Ratings (Tc=25°C)

TO-92 NPN

PARAMETER	SYMBOL	VALUE	UNIT
Collector - Base Voltage	V <sub>CB0</sub>	500	V
Collector - Emitter Voltage	V <sub>CE0</sub>	400	V
Emitter - Base Voltage	V <sub>EBO</sub>	9	V
Collector Current	I <sub>C</sub>	0.3	A
Total Power Dissipation	P <sub>C</sub>	7	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	- 65-150	°C



● Electronic Characteristics (Tc=25°C)

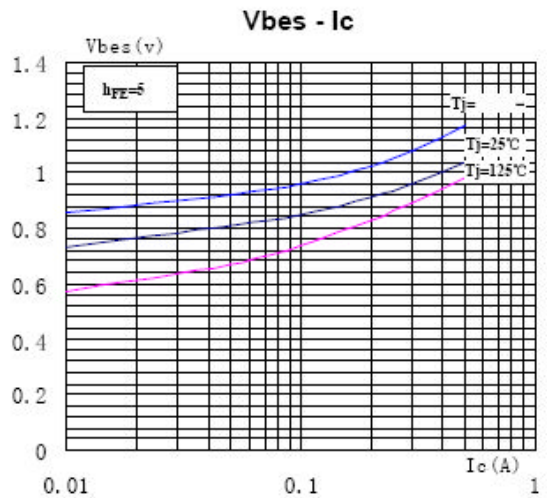
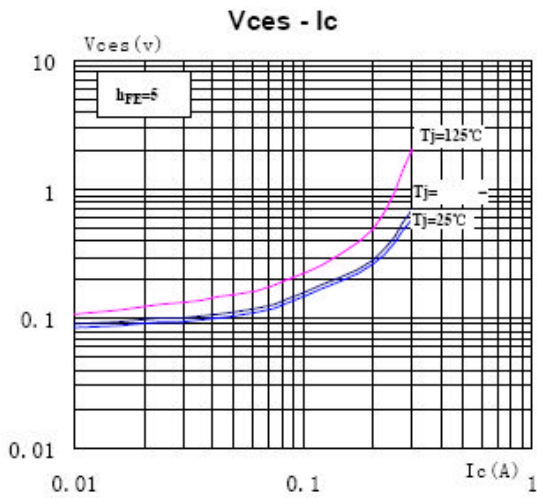
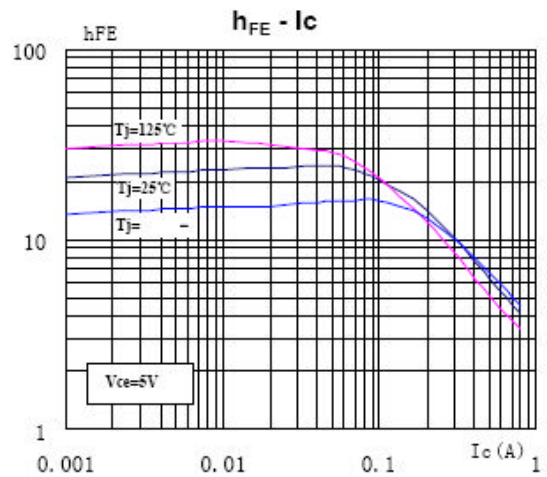
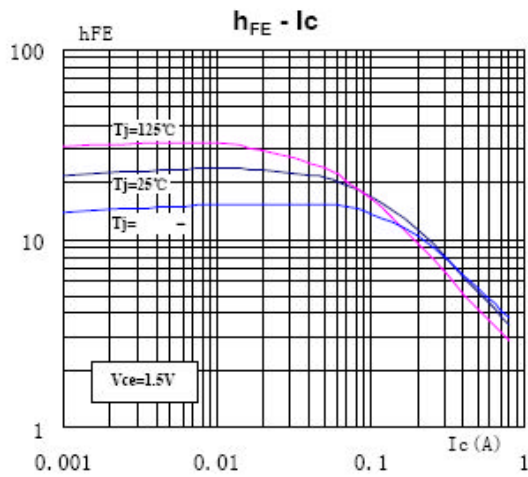
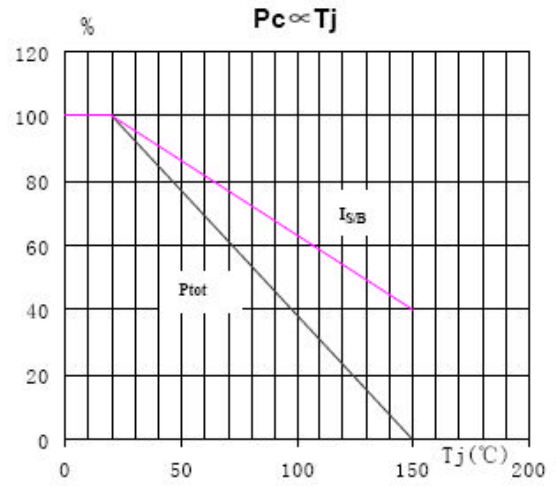
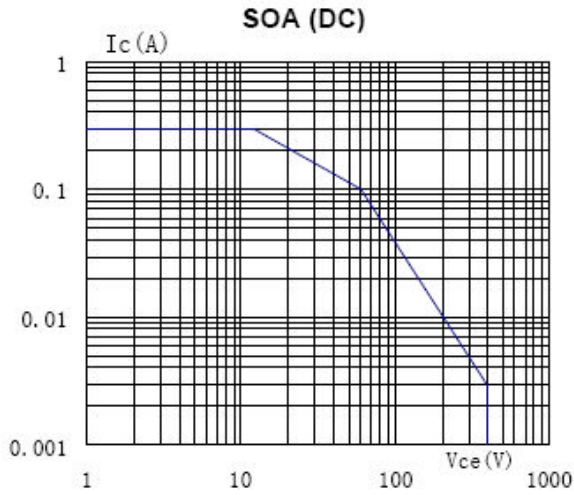
CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector - Base Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> = 500v		100	μA
Collector - Emitter Cutoff Current	I <sub>CE0</sub>	V <sub>CE</sub> = 400v		250	μA
Collector - Emitter Voltage	V <sub>CE0</sub>	I <sub>C</sub> = 10mA I <sub>B</sub> = 0	400		V
Emitter - Base Voltage	V <sub>EBO</sub>	I <sub>E</sub> = 1mA I <sub>C</sub> = 0	9		V
Collector - Emitter Saturation Voltage	V <sub>cesat</sub>	I <sub>C</sub> = 0.05A I <sub>B</sub> = 0.01A		0.4	V
		I <sub>C</sub> = 200m A I <sub>B</sub> = 50m A		0.8	V
Base - Emitter Saturation Voltage	V <sub>besat</sub>	I <sub>C</sub> = 50m A I <sub>B</sub> = 10m A		1.1	V
DC Current Gain	HFE	V <sub>CE</sub> = 5v I <sub>C</sub> = 1mA	7		
		V <sub>CE</sub> = 20v I <sub>C</sub> = 20m A	10	40	
		V <sub>CE</sub> = 5v I <sub>C</sub> = 250m A	5		
Storage Time	T <sub>S</sub>	V <sub>CC</sub> = 5V	0.5	2.5	μS
Falling Time	T <sub>f</sub>	I <sub>C</sub> = 0.1A		0.8	μS

● CLASSIFICATION OF HFE AND TS

HFE	10 - 15	15 - 20	20 - 25	25 - 30
TS	0.5 - 1.0	1.0 - 1.5	1.5 - 2.0	2.0 - 2.5

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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

