

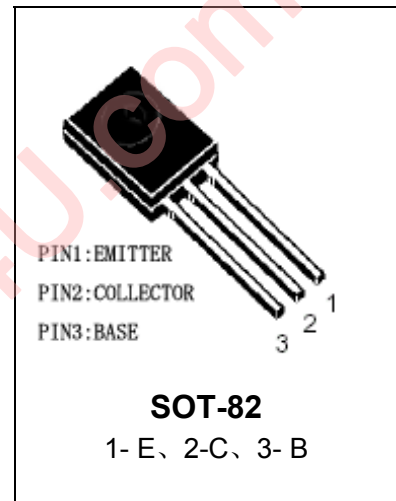
**NPN SILICON POWER TRANSISTOR****BUL1688L**

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

● **APPLICATIONS:** SUITABLE FOR 110V CIRCUIT MODE: ■ COMPACT FLUORESCENT LAMP  
 ■ ELECTRONIC BALLASTS FOR FLUORESCENT LIGHTING ■ SWITCH MODE POWER SUPPLIES

● **MAXIMUM RATINGS ( T<sub>c</sub>=25°C ) SOT-82**

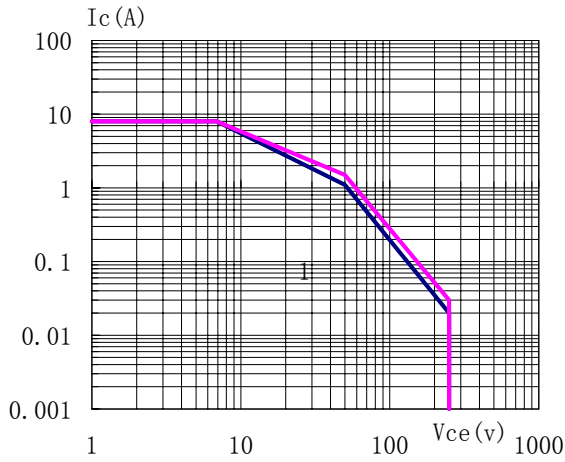
PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V <sub>CB0</sub>	400	V
Collector-Emitter Voltage	V <sub>CEO</sub>	250	V
Emitter-Base Voltage	V <sub>EBO</sub>	9	V
Collector Current	I <sub>C</sub>	8.0	A
Total Power Dissipation	P <sub>C</sub>	60	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-65-150	°C



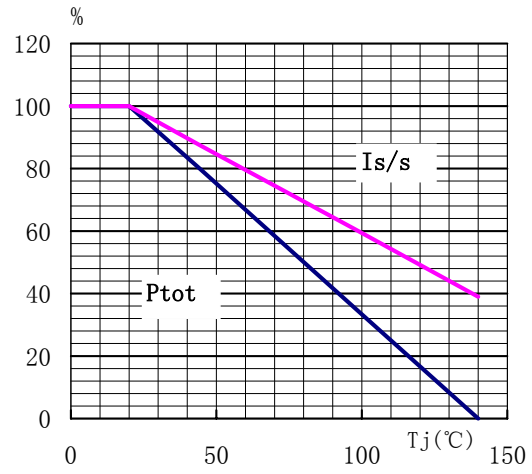
● **ELECTRICAL CHARACTERISTICS ( T<sub>c</sub>=25°C )**

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> =400V		100	μ A
Collector Cutoff Current	I <sub>CEO</sub>	V <sub>CE</sub> =250V, I <sub>B</sub> =0		250	μ A
Collector-Emitter Sustaining Voltage	V <sub>CEO</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =0	250		V
Base-Emitter Sustaining Voltage	V <sub>EBO</sub>	I <sub>E</sub> =1mA, I <sub>C</sub> =0	9		V
Collector-Emitter Saturation Voltage	V <sub>ces</sub>	I <sub>C</sub> =1.0A, I <sub>B</sub> =0.2A		0.5	V
		I <sub>C</sub> =2.0A, I <sub>B</sub> =0.4A		0.7	
		I <sub>C</sub> =5.0A, I <sub>B</sub> =1.0A		1.5	
Base-Emitter Saturation Voltage	V <sub>bes</sub>	I <sub>C</sub> =2.0A, I <sub>B</sub> =0.4A		1.5	V
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =10mA	8		
		V <sub>CE</sub> =5V, I <sub>C</sub> =1.0A	10	40	
		V <sub>CE</sub> =5V, I <sub>C</sub> =5A	5		

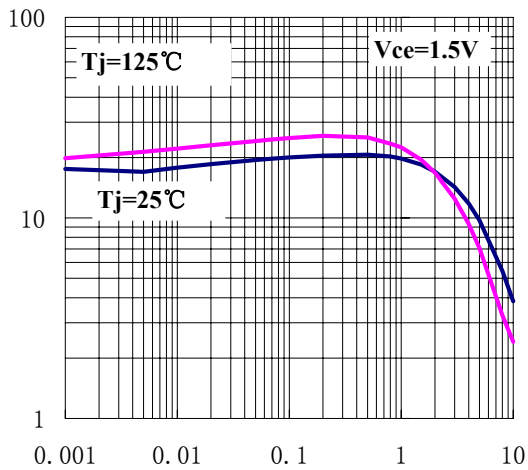
SOA(DC)



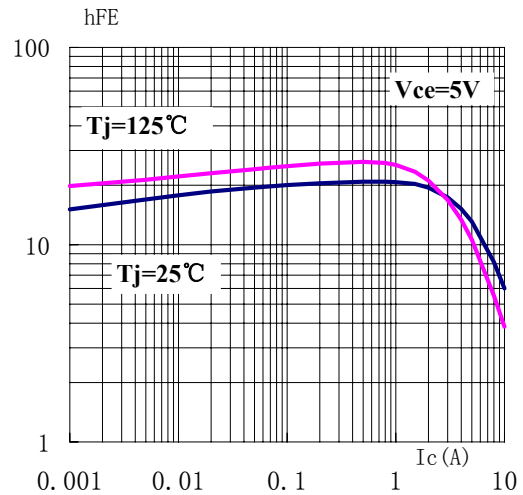
$P_c \propto T_j$



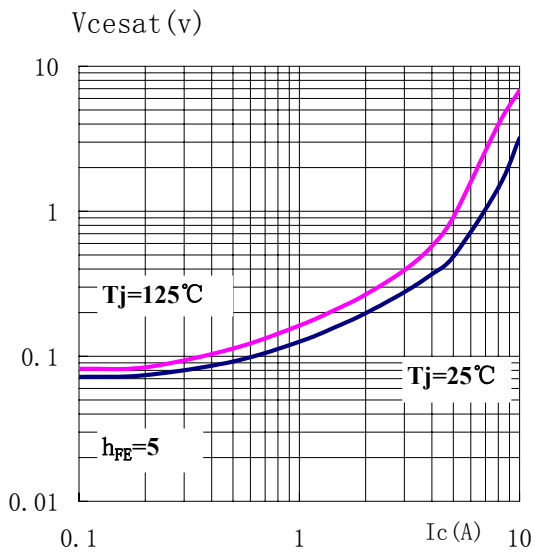
hFE-Ic



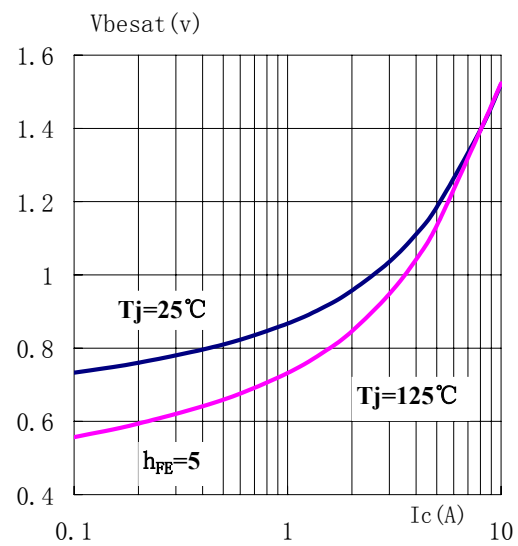
hFE-Ic



Vcesat-Ic



Vbesat-Ic



**SOT-82 MECHANICAL DATA**

UNIT: mm

SYMBOL	min	nom	max
A	7.4		7.8
B	10.5		10.8
b	0.7		0.9
b1	0.49		0.75
C	2.4		2.7
c1	1.0		1.3
D	15.4		16
e		2.2	
e3	4.15		4.65
F		3.8	
H			2.54
H2		2.15	

