SEMICONDUCTOR
TECHNICAL DATA

MJE13009P

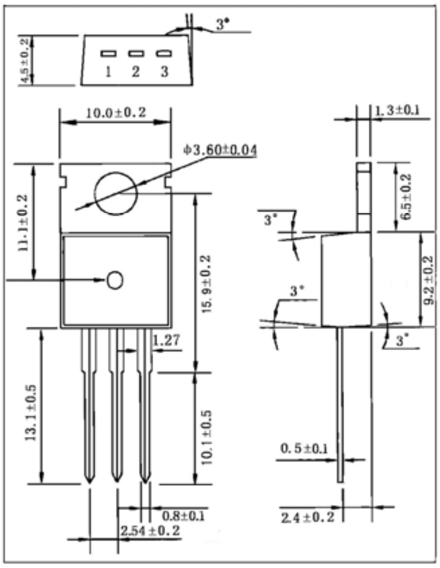
NPN SILICON POWER TRANSISTORS

Purpose: High frequency electronic lighting ballast applications.

Absolute maximum ratings(Ta=25℃)

Symbol	Rating	Unit
V_{CBO}	700	V
V_{CEO}	400	V
V_{EBO}	9.0	V
I_C	12	A
P_C(Ta=25℃)	2.0	W
P_C(Tc=25℃)	100	W
T_j	150	℃
T_{stg}	-55～150	℃

TO-220 单位 :mm

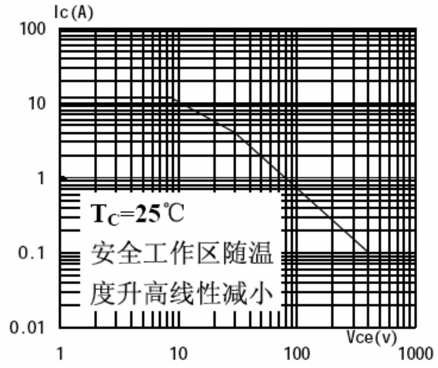


引脚: 1 B 2 C 3 E

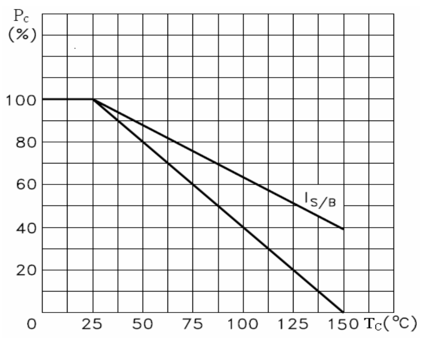
Electrical characteristics(Ta=25℃)

Symbol	Test condition	Rating			Unit
		Min	Typ	Max	
V_{CBO}	I_C=1mA I_E=0	700			V
V_{CEO}	I_C=10mA I_B=0	400			V
V_{EBO}	I_E=1mA I_C=0	9.0			V
I_{CBO}	V_{CB}=700V I_E=0			0.1	mA
I_{CEO}	V_{CE}=400V I_B=0			0.1	mA
I_{EBO}	V_{EB}=9.0V I_C=0			0.1	mA
h_{FE}	V_{CE}=5.0V I_C=5.0A	10		40	
$V_{CE(sat)}$	I_C=8.0A I_B=1.6A			1.2	V
$V_{BE(sat)}$	I_C=8.0A I_B=1.6A			1.6	V
f_T	V_{CE}=10V I_C=0.5A f=1.0MHz	5.0			MHz
t_f	V_{CE}=5V I_C=0.5A (UI9600)			0.5	μs
t_S		4.0		12	μs

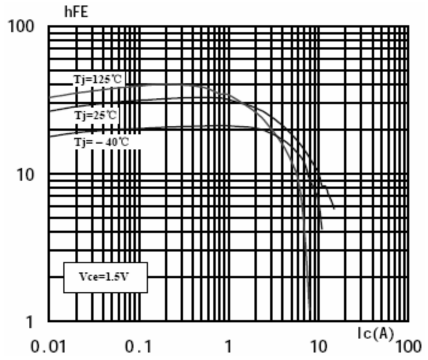
SOA (DC)



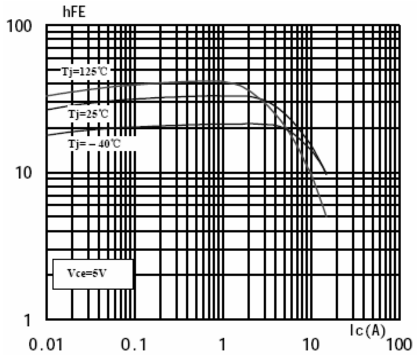
P_C-T_C



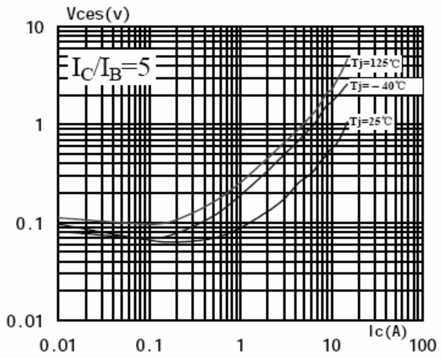
h_{FE}-Ic



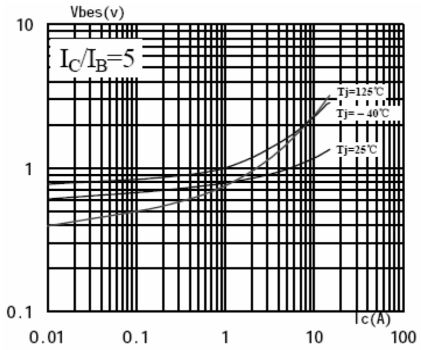
h_{FE}-Ic



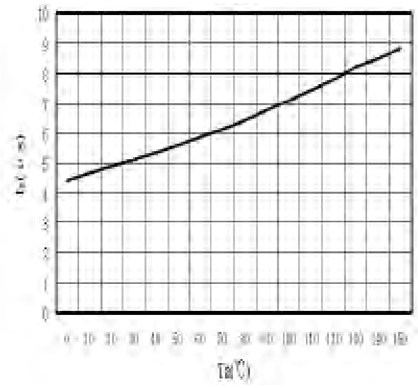
Vces-I_C



Vbes-I_C



t_S-Ta



h_{FE}-Ta