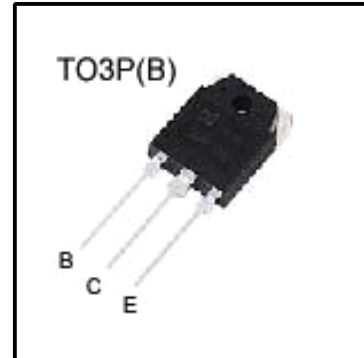


*High Voltage Fast-Switching NPN Power Transistor***Features**

- Very High Switching Speed
- High Voltage Capability
- Wide Reverse Bias SOA

General Description

This Device is designed for high voltage, High speed switching characteristics required such as lighting system, switching mode power supply.

**Absolute Maximum Ratings**

Symbol	Parameter	Test Conditions	Value	Units
V_{CES}	Collector-Emitter Voltage	$V_{BE}=0$	700	V
V_{CEO}	Collector -emitter Voltage	$I_B=0$	400	V
V_{EBO}	Emitter-Base Voltage	$I_C=0$	9.0	V
I_C	Collector Current		12	A
I_{CP}	Collector pulse Current		25	A
I_B	Base Current		6.0	A
I_{BM}	Base Peak Current	$t_P=5ms$	12	A
P_C	Total Dissipation at $T_c=25^{\circ}C$		120	W
T_J	Operation Junction Temperature		-40~150	$^{\circ}C$
T_{STG}	Storage Temperature		-40~150	$^{\circ}C$

Thermal Characteristics

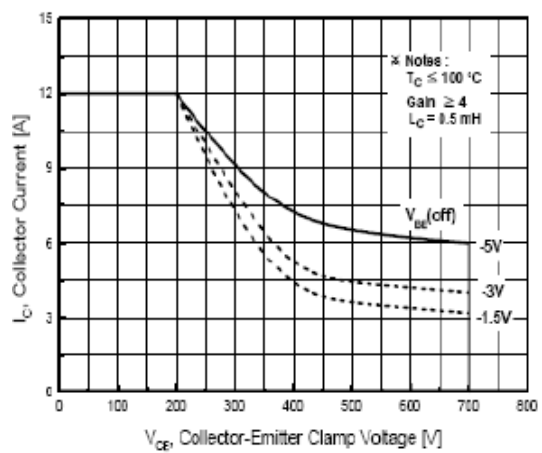
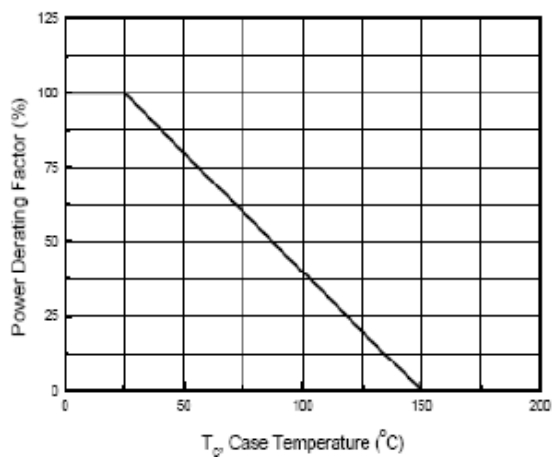
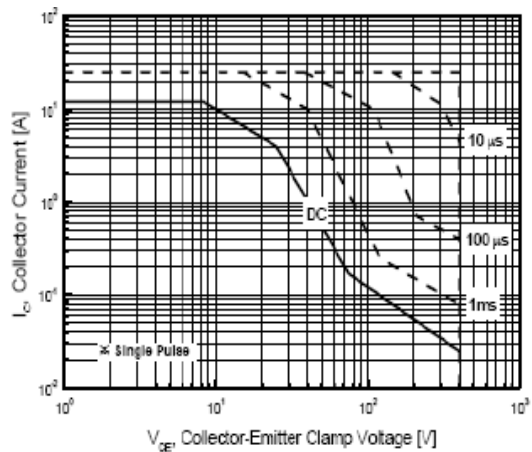
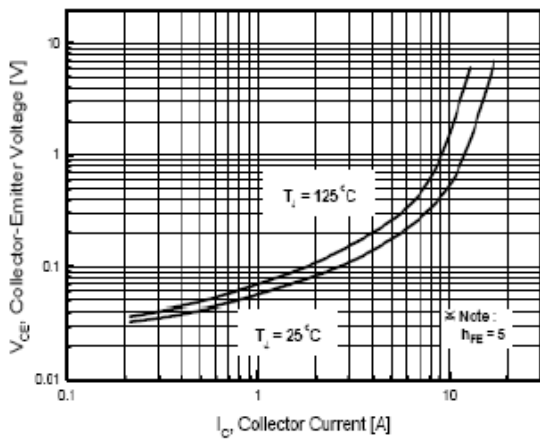
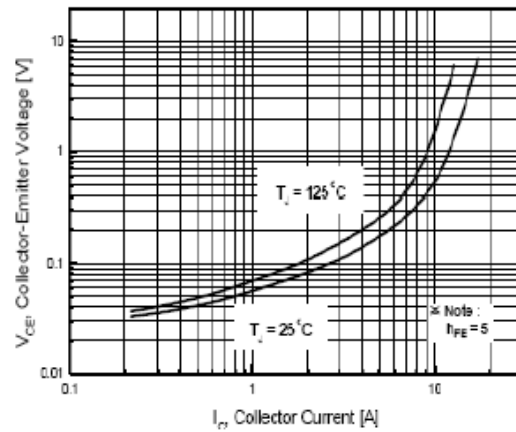
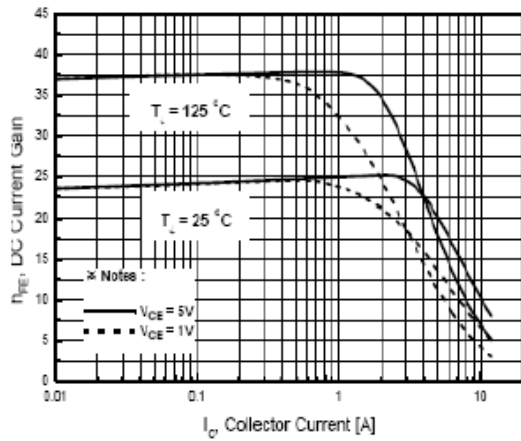
Symbol	Parameter	Value	Units
$R_{\theta JC}$	Thermal Resistance Junction to Case	1.04	$^{\circ}C/W$
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	62.5	$^{\circ}C/W$

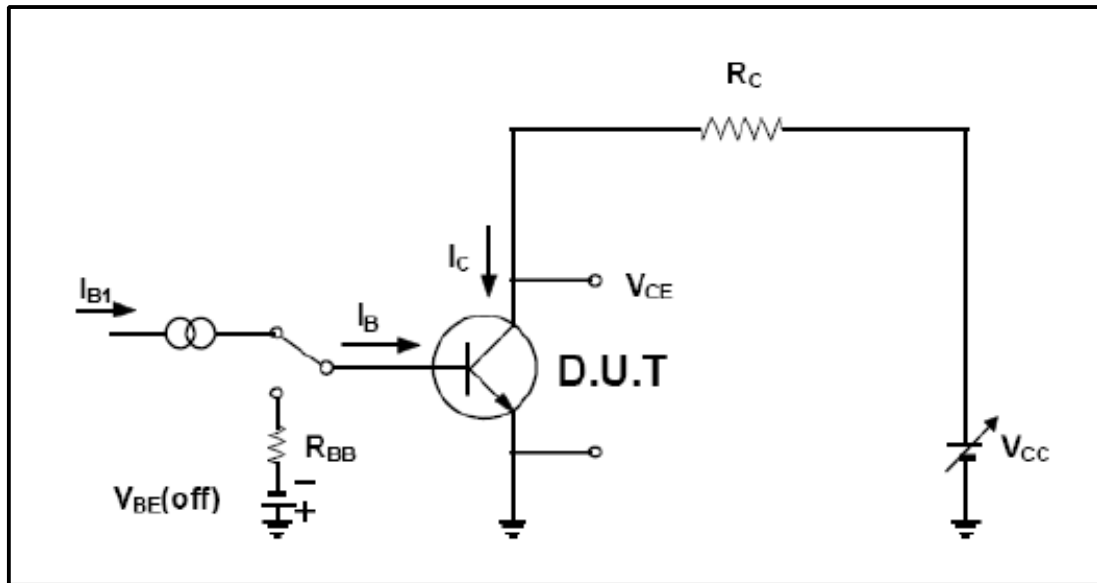
Electrical Characteristics(T_c=25℃ unless otherwise noted)

Symbol	Parameter	Test Conditions	Value			Units
			Min	Typ	Max	
V _{CEO(sus)}	Collector –Emitter Breakdown Voltage	I _c =10mA, I _b =0	400	–	–	V
V _{CE(sat)}	Collector –Emitter Saturation Voltage	I _c =5.0A, I _b =1.0A			1.0	V
		I _c =8.0A, I _b =1.6A	–	–	1.5	
		I _c =12A, I _b =3.0A			3.0	
V _{BE(sat)}	Base–Emitter Saturation Voltage	I _c =8.0A, I _b =1.6A	–	–	2.0	V
		T _c =100℃				
V _{BE(sat)}	Base–Emitter Saturation Voltage	I _c =5.0A, I _b =1.0A	–	–	1.2	V
		I _c =8.0A, I _b =1.6A			1.6	
I _{EBO}	Emitter–Base Cutoff Current	I _c =8.0A, I _b =1.6A	–	–	1.5	V
		T _c =100℃				
I _{EBO}	Emitter–Base Cutoff Current	V _{eb} =9V, I _c =0V	–	–	10	uA
h _{FE}	DC Current Gain	V _{ce} =5V, I _c =5.0A	10	–	40	
		V _{ce} =5V, I _c =8.0A	6	–	30	
t _s	Storage Time	V _{cc} =5.0V, I _c =0.5A	4	–	10	μs
t _f	Fall Time	(UI9600)		–	0.8	
f _r	Current Gain Bandwidth Product	V _{ce} =10V, I _c =0.5A	4			MHz

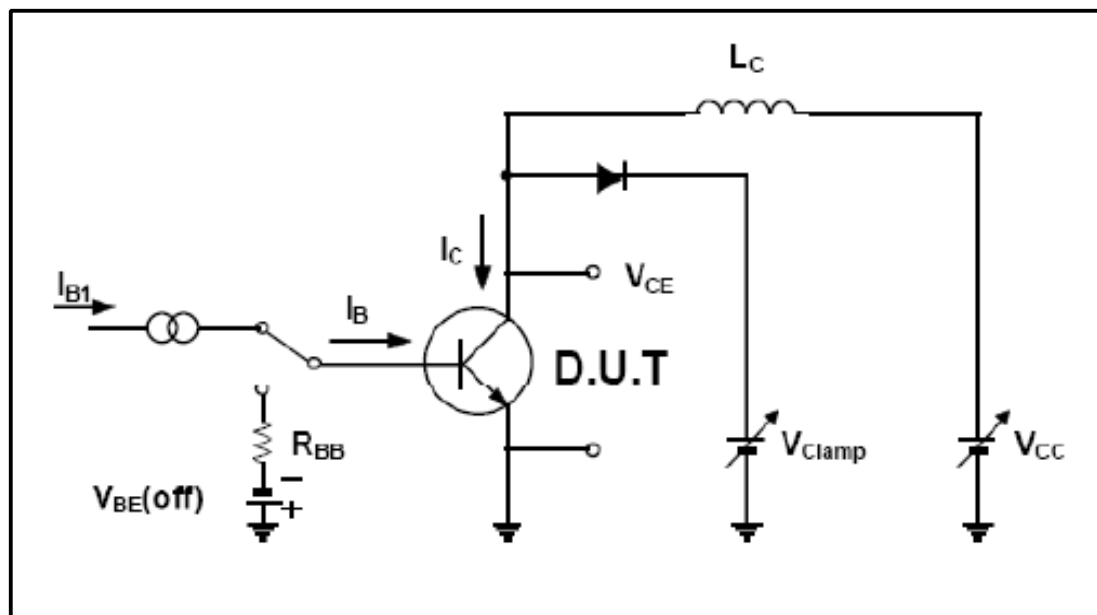
Note :

Pulse Test : Pulse width 300,Duty cycle 2%





Resistive Load Switching Test Circuit



Inductive Load Switching & RBSOA Test Circuit

To3P(B) Package Dimension

Unit :mm

