

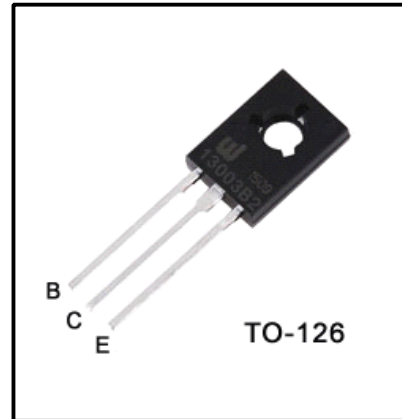
High Voltage Fast -Switching NPN Power Transistor

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	600	V
V _{CEO}	Collector -Emitter voltage	I _B =0	400	V
V _{EBO}	Emitter-Bade Voltage	I _C =0	9.0	V
I _C	Collector Current		1.2	A
I _{CP}	Collector pulse Current		2.4	A
I _B	Base Current		0.75	A
I _{BM}	Base Peak Current	t _p =5ms	1.5	A
P _C	Total dissipation at T _c =25℃		20	W
T _J	Operation Junction Temperature		-40~150	℃
T _{STG}	Storage Temperature		-40~150	℃

Thermal Characteristics

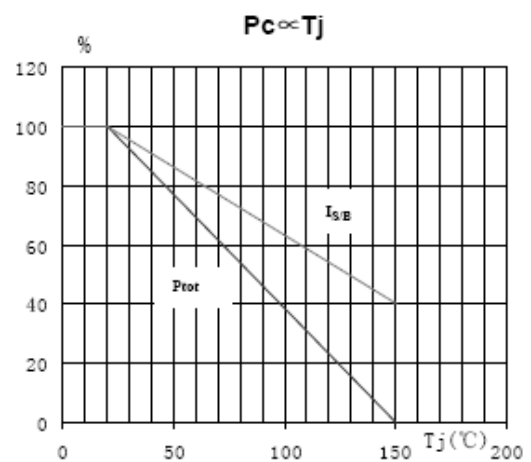
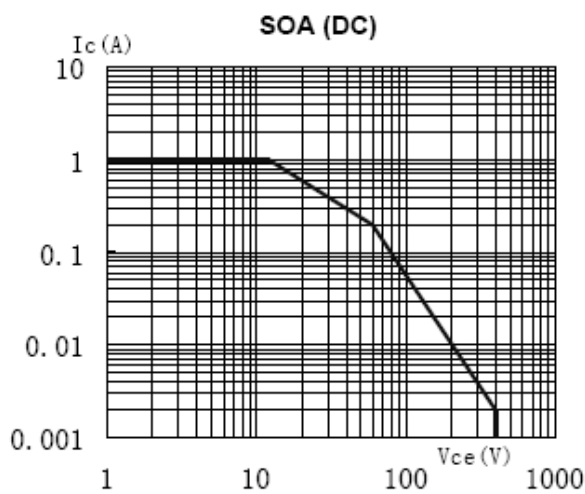
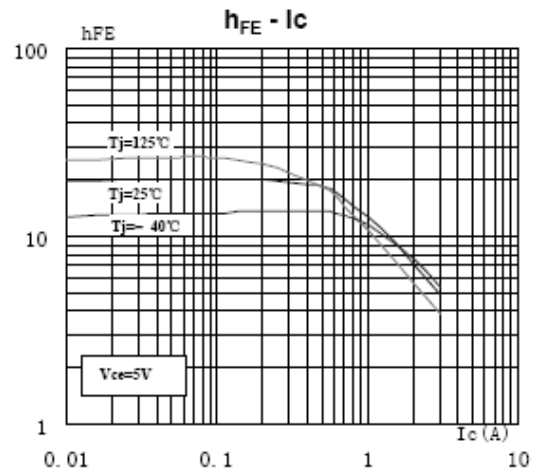
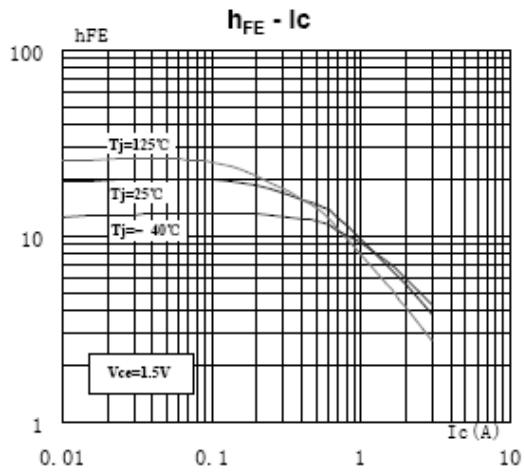
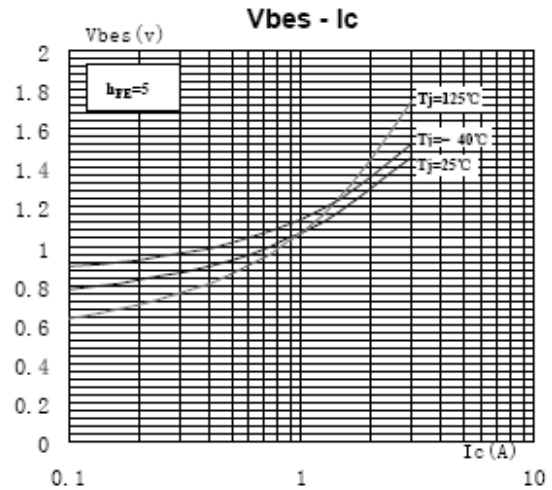
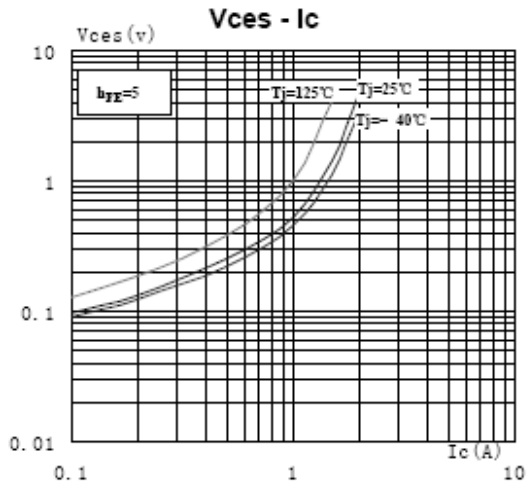
Symbol	Parameter	Value	Units
R _{θJC}	Thermal Resistance Junction to Case	6.25	℃/W
R _{θJA}	Thermal Resistance Junction to Ambient	89	℃/W

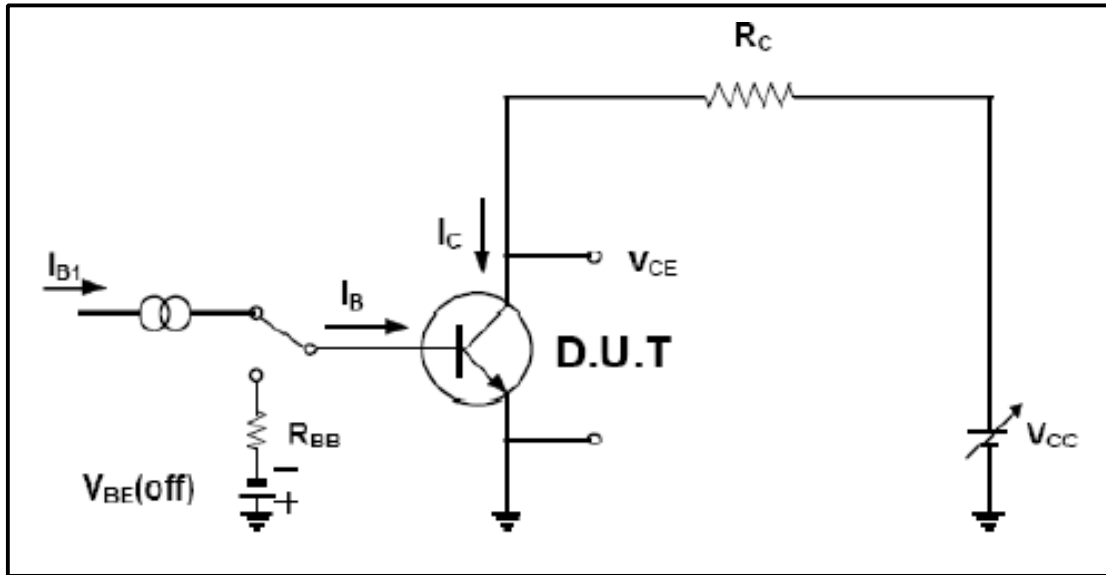
Electrical Characteristics (Tc=25°C unless otherwise noted)

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 =0.2A, I _b =40mA	-	-	0.3	V
V _{BE(sat)}	Base -Emitter Saturation Voltage	I _c =0.2A, I _b =40mA	-	-	1.2	V
I _{CBO}	Collector -Base Cutoff Current	V _{cb} =600V I _e =0	-	-	0.1	mA
I _{CEO}	Collector -Emitter Cutoff Current	V _{ce} =400V I _b =0	-	-	0.25	mA
I _{EBO}	Emitter -Base Cutoff Current	V _{eb} =7V I _c =0	-	-	0.1	mA
hFE	DC Current Gain	V _{ce} =10V, I _c =10mA	10	-	30	
f _T	Characteristic frequency	V _{ce} =10V I _c =50mA F=1MHz	5	-	-	MHz
ton	Turn -on Time	V _{cc} =5V, I _c =0.25A	1.5	0.2	1.0	μs
ts	Storage Time			-	4.0	
tf	Fall Time			0.15	0.4	

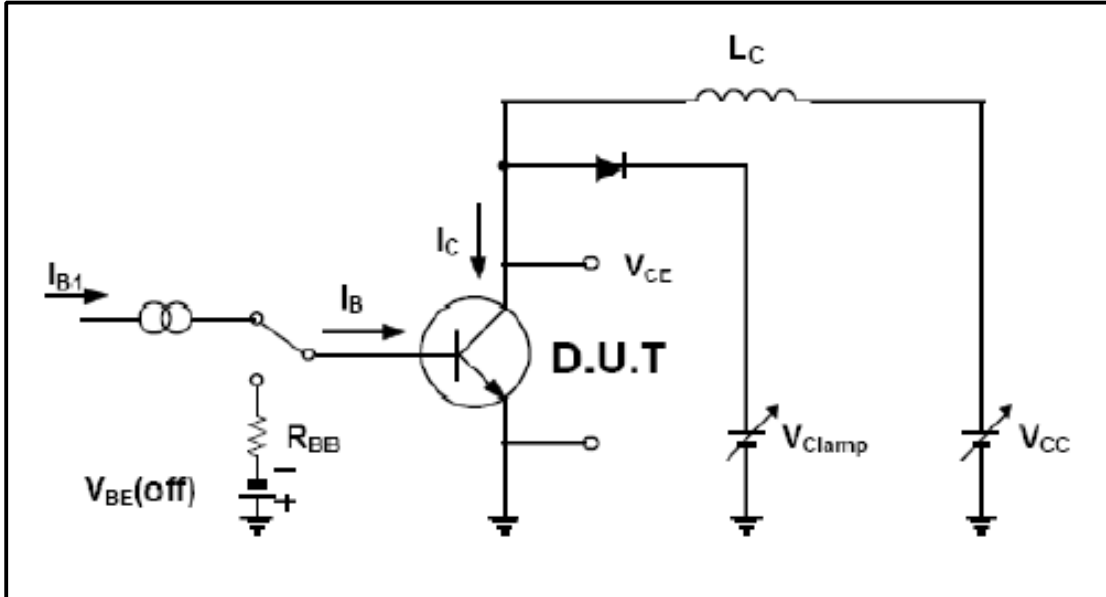
Note :

Pulse Test : Pulse width 300, Duty cycle 2%





Resistive Load Switching test Circuit



Inductive Load Switching & RBSOA Test circuit

TO-126 Package Dimension

