

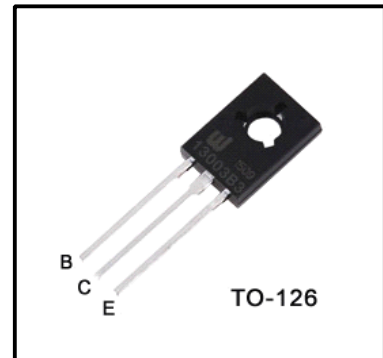
*High Voltage Fast -Switching NPN Power Transistor*

**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 compact electronic energy saving lamps, electronic ballast and mobile phone chargers power Switch circuit, is the core component of such electronic products.



**Absolute Maximum Ratings**

Symbol	Parameter	Test Conditions	Value	Units
V <sub>CES</sub>	Collector -Emitter Voltage	V <sub>BE</sub> =0	600	V
V <sub>CEO</sub>	Collector -Emitter voltage	I <sub>B</sub> =0	450	V
V <sub>EBO</sub>	Emitter-Bade Voltage	I <sub>C</sub> =0	9.0	V
I <sub>C</sub>	Collector Current		1.0	A
I <sub>CP</sub>	Collector pulse Current		2.0	A
P <sub>C</sub>	Total dissipation at T <sub>c</sub> =25℃		18	W
T <sub>J</sub>	Operation Junction Temperature		150	℃
T <sub>STG</sub>	Storage Temperature		-40~150	℃

**Thermal Characteristics**

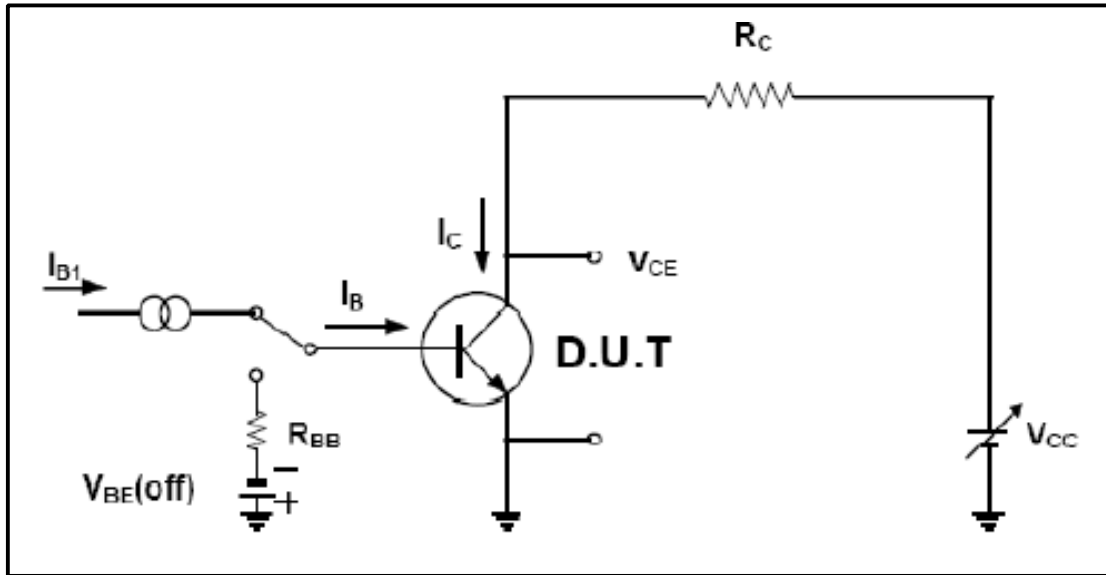
Symbol	Parameter	Value	Units
R <sub>θJC</sub>	Thermal Resistance Junction to Case	6.94	℃/W
R <sub>θJA</sub>	Thermal Resistance Junction to Ambient	89	℃/W

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

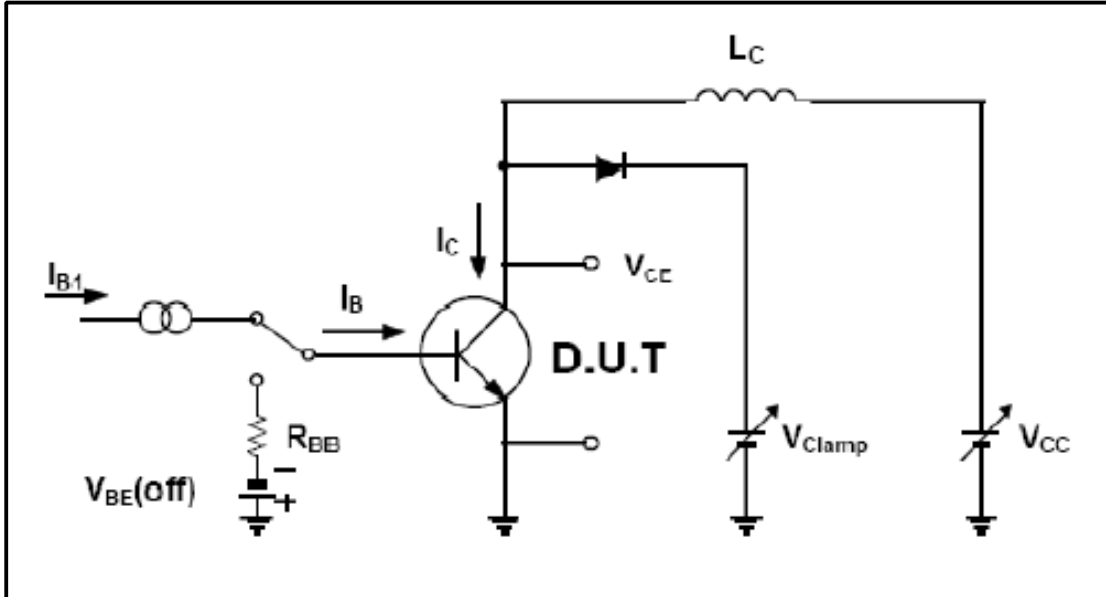
Symbol	Parameter	Test Conditions	Value			Units
			Min	Typ	Max	
V <sub>CEO(sus)</sub>	Collector-Emitter Breakdown Voltage	I <sub>c</sub> =10mA, I <sub>b</sub> =0	450	-	-	V
V <sub>CE(sat)</sub>	Collector -Emitter Saturation Voltage	I <sub>c</sub> =0.2A, I <sub>b</sub> =40mA	-	-	0.3	V
V <sub>BE(sat)</sub>	Base -Emitter Saturation Voltage	I <sub>c</sub> =0.2A, I <sub>b</sub> =40mA	-	-	1.2	V
I <sub>CBO</sub>	Collector -Base Cutoff Current	V <sub>cb</sub> =600V I <sub>e</sub> =0	-	-	0.1	mA
I <sub>CEO</sub>	Collector -EmitterCutoff Current	V <sub>ce</sub> =400V I <sub>b</sub> =0	-	-	0.25	mA
I <sub>EBO</sub>	Emitter -Base Cutoff Current	V <sub>eb</sub> =7V I <sub>c</sub> =0	-	-	0.1	mA
hFE	DC Current Gain	V <sub>ce</sub> =10V, I <sub>c</sub> =10mA	10	-	30	
f <sub>T</sub>	Characteristic frequency	V <sub>ce</sub> =10V I <sub>c</sub> =50mA F=1MHz	5	-	-	MHz
ton	Turn -on Time	V <sub>cc</sub> =5V, I <sub>c</sub> =0.1A	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**

