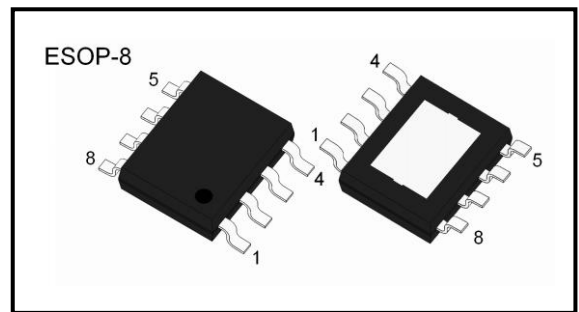
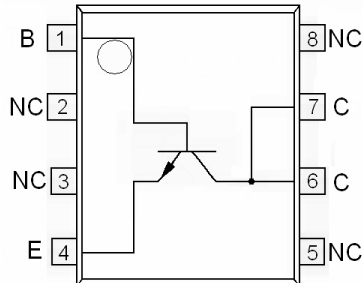


High Voltage Mode Application

- High Speed Switching
- Suitable for Switching Regulator and Motor Control

Diagram**Absolute Maximum Rating** ($T_a=25^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	BV_{CBO}	700	V
Collector-Emitter Voltage	BV_{CEO}	480	V
Emitter-Base Voltage	BV_{EBO}	9	V
Collector Current	I_C	1.5	A
Collector Power Dissipation ($T_a=25^{\circ}\text{C}$)	P_C	0.9	W
Junction Temperature	T_j	150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-55~150	$^{\circ}\text{C}$

Electrical Characteristics ($T_a=25^{\circ}\text{C}$)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	BV_{CBO}	$I_C = 100\mu\text{A}$, $I_E = 0$	700			V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = 1\text{mA}$, $I_B = 0$	480			V
Emitter-base breakdown voltage	BV_{EBO}	$I_E = 100\mu\text{A}$, $I_C = 0$	9			V
Collector cut-off current	I_{CBO}	$V_{CB} = 700\text{V}$, $I_E = 0$			10	μA
Collector cut-off current	I_{CEO}	$V_{CE} = 450\text{V}$, $I_B = 0$			1	mA
Emitter cut-off current	I_{EBO}	$V_{EB} = 9\text{V}$, $I_C = 0$			10	μA
DC current gain	h_{FE}	$V_{CE} = 2\text{V}$, $I_C = 0.5\text{A}$	8		40	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 0.5\text{A}$, $I_B = 0.1\text{A}$ $I_C = 1\text{A}$, $I_B = 0.25\text{A}$ $I_C = 1.5\text{A}$, $I_B = 0.5\text{A}$			0.5 1.0 1.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 0.5\text{A}$, $I_B = 0.1\text{A}$ $I_C = 1\text{A}$, $I_B = 0.25\text{A}$			1.0 1.2	V
Transition frequency	f_T	$V_{CE} = 10\text{V}$, $I_B = 0.1\text{A}$	8			MHz

Typical Characteristics

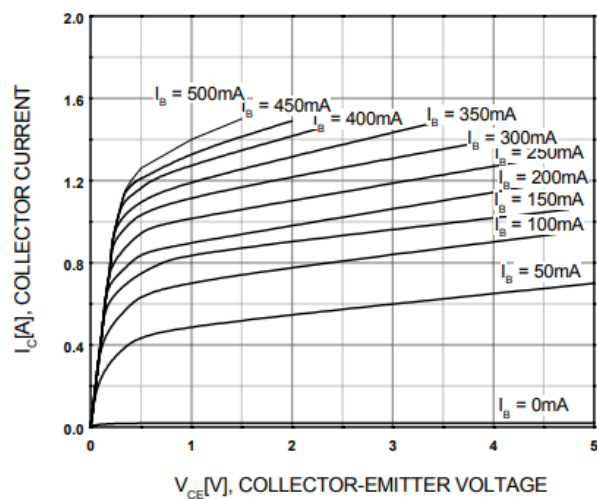


Figure 1. Static Characteristic

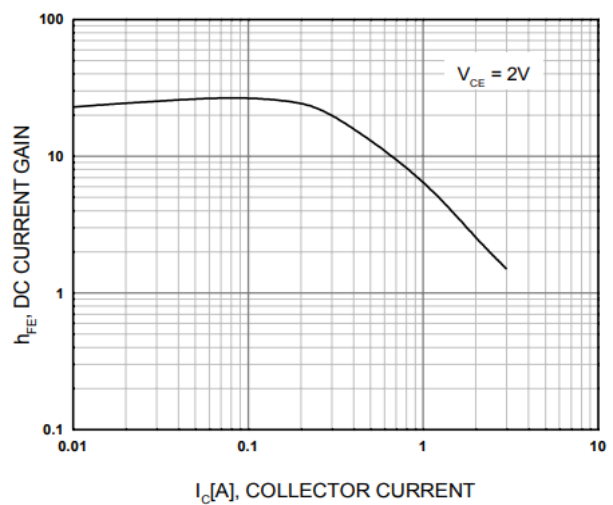


Figure 2. DC current Gain

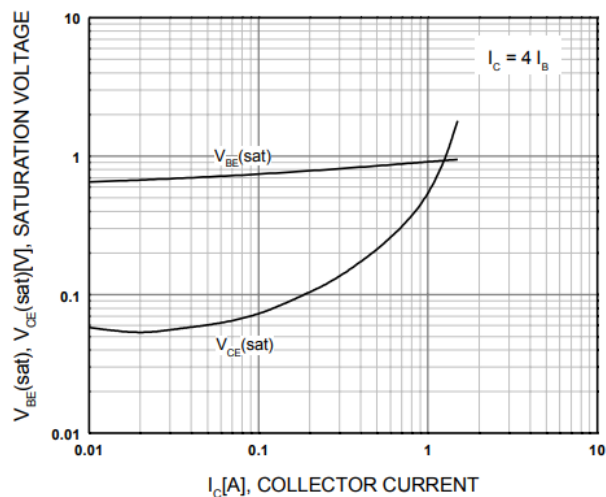
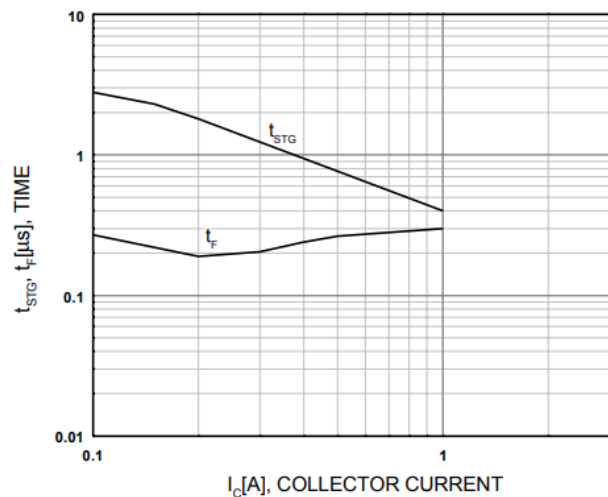
Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

Figure 4. Switching Time

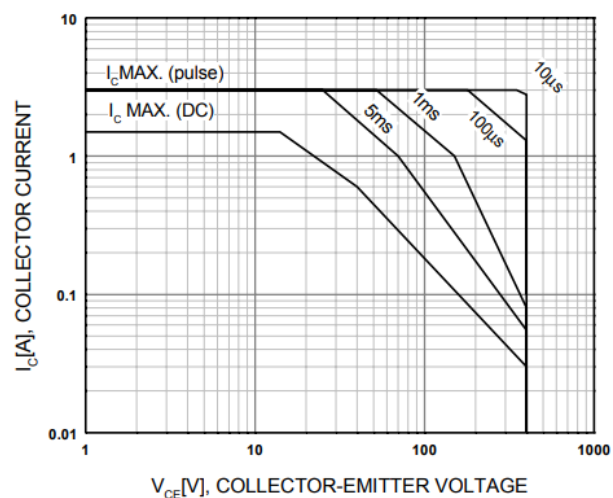


Figure 5. Safe Operating Area

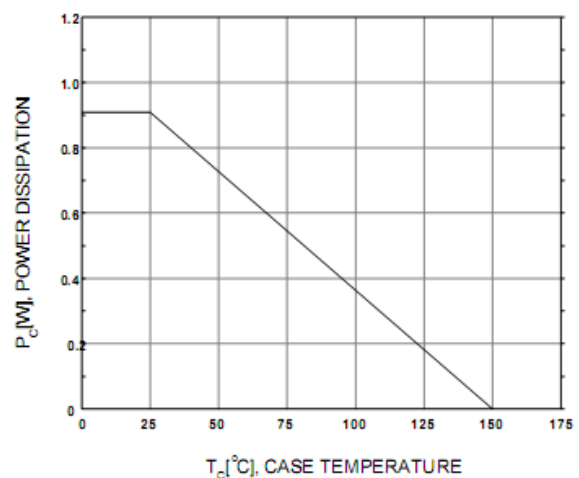


Figure 6. Power Derating

Package Dimensions

