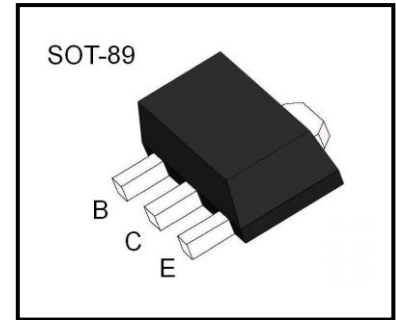


Features

- 3 Amps continuous current
- Low saturation voltages
- Hight voltage



Absolute Maximum Rating ($T_C=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-base voltage	BV_{CBO}	80	V
Collector-emitter voltage	BV_{CEO}	60	V
Emitter-base voltage	BV_{EBO}	5	V
Continuous collector current	I_C	3	A
Peak pulse current	I_{CM}	6	A
Power dissipation	P_D	1	W
Junction temperature	T_j	150	$^{\circ}\text{C}$
Storage temperature	T_{stg}	-55~150	$^{\circ}\text{C}$

Electrical Characteristics ($T_C=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BV_{CBO}	$I_C = 100\mu\text{A}$, $I_E = 0$	80			V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = 1\text{mA}$, $I_B = 0$	60			V
Emitter-base breakdown voltage	BV_{EBO}	$I_E = 100\mu\text{A}$, $I_C = 0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB} = 60\text{V}$, $I_B = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 4\text{V}$, $I_C = 0$			0.1	μA
DC current gain	h_{FE}	$V_{CE} = 2\text{V}$, $I_C = 50\text{mA}$ $V_{CE} = 2\text{V}$, $I_C = 0.5\text{A}$ $V_{CE} = 2\text{V}$, $I_C = 1\text{A}$ $V_{CE} = 2\text{V}$, $I_C = 2\text{A}$	70 100 80 40		300	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1\text{A}$, $I_B = 100\text{mA}$ $I_C = 3\text{A}$, $I_B = 300\text{mA}$			0.3 0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 1\text{A}$, $I_B = 100\text{mA}$			1.25	V
Base-emitter turn-on voltage	$V_{BE(on)}$	$V_{CE} = 2\text{V}$, $I_C = 1\text{A}$			1.0	V
Transition frequency	f_T	$V_{CE} = 5\text{V}$, $I_C = 100\text{mA}$	140			MHz
Output capacitance	C_{ob}	$V_{CB} = 10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$			30	pF

Typical Characteristics

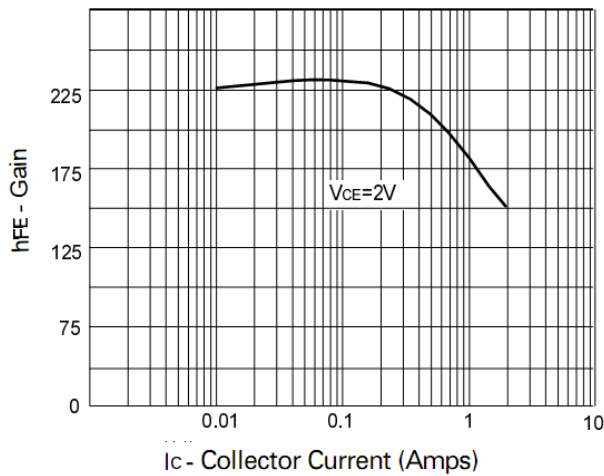


Figure 1. DC current Gain

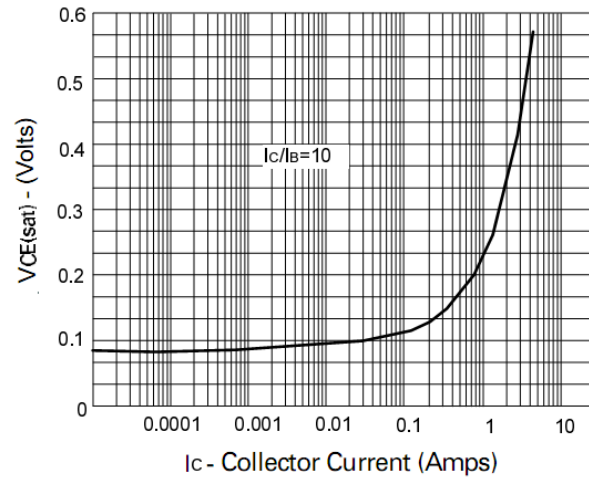


Figure 2. Collector-Emitter Saturation Voltage

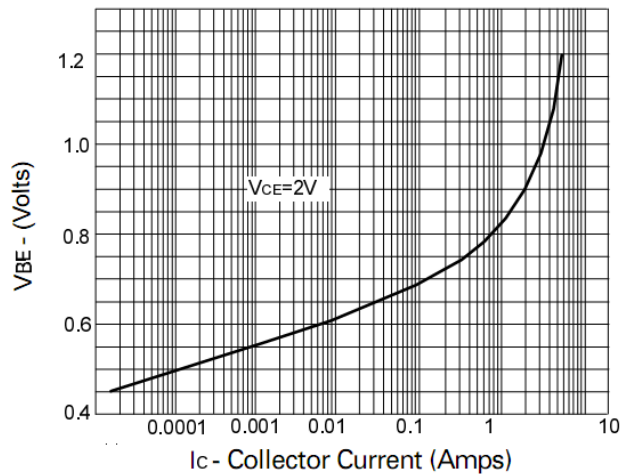


Figure 3. Base-Emitter on Voltage

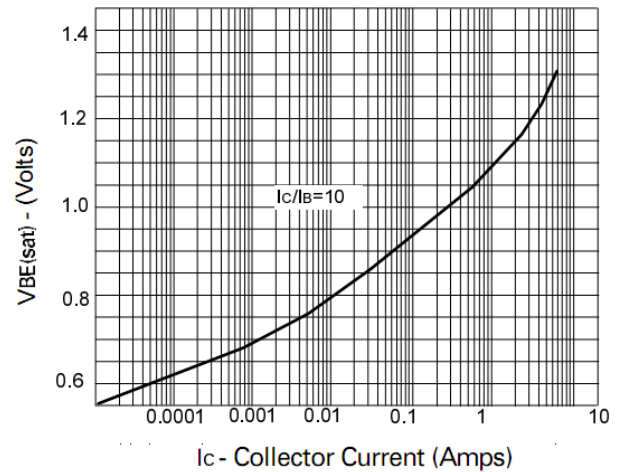


Figure 4. Base-Emitter Saturation Voltage

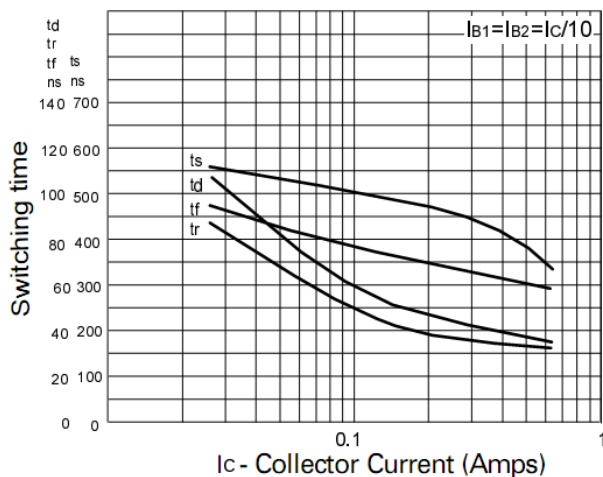


Figure 5. Switching Speeds

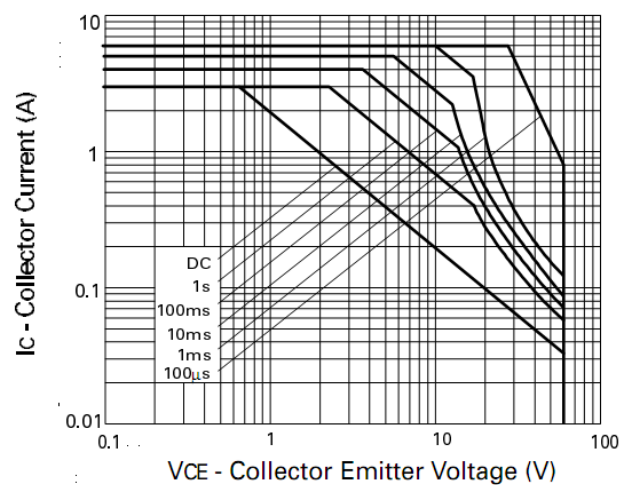


Figure 6. Safe Operating Area

Package Dimensions

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	1.40	1.60	0.055	0.063
b	0.32	0.52	0.013	0.020
b1	0.38	0.58	0.015	0.023
c	0.35	0.45	0.014	0.018
D	4.40	4.60	0.173	0.181
D1	1.45	1.65	0.057	0.065
D2	1.70	1.80	0.067	0.071
E	2.30	2.60	0.091	0.102
E1	3.95	4.25	0.156	0.167
E2	1.80	2.00	0.071	0.079
e	1.40	1.60	0.055	0.063
e1	2.80	3.20	0.110	0.126
L	0.90	1.20	0.035	0.047

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