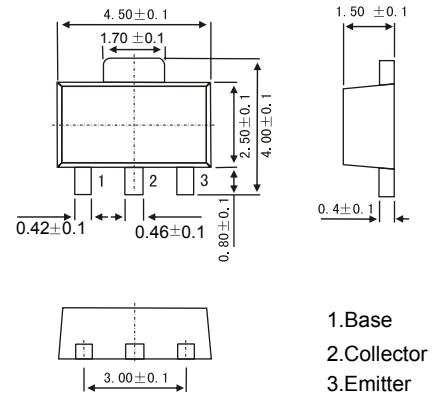


SOT-89

Unit:mm



■ Features

- Collector Current Capability $I_C=1A$
- Collector Emitter Voltage $V_{CE0}=20V$
- High gain and low saturation voltages

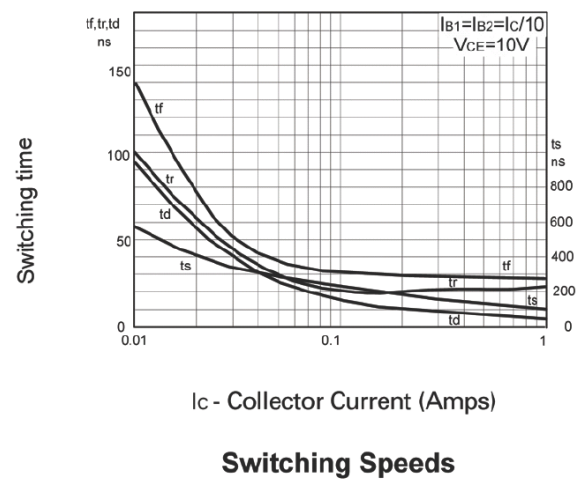
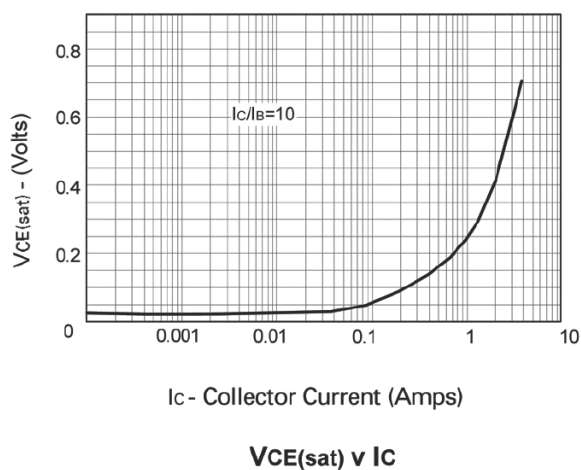
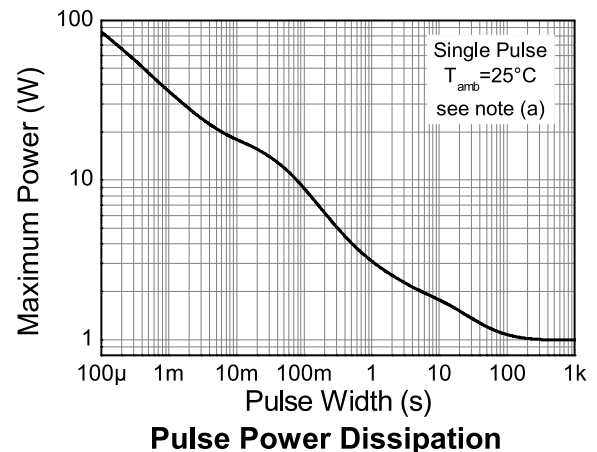
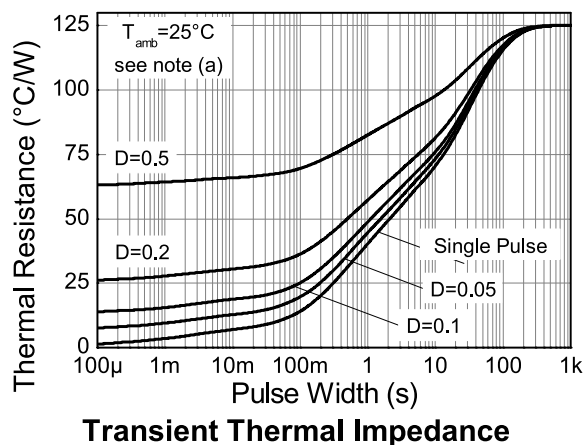
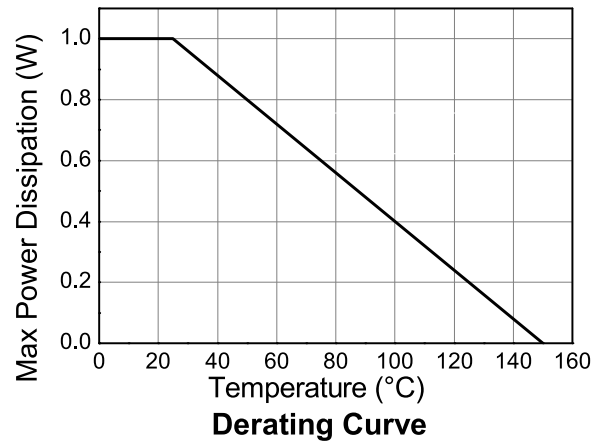
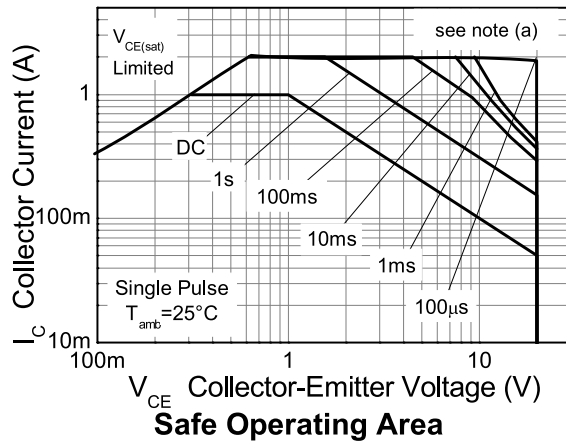
■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	25	V
Collector - Emitter Voltage	V_{CEO}	20	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_C	1	A
Collector Current - Pulse	I_P	2	
Collector Power Dissipation	P_C	1	W
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-65 to 150	

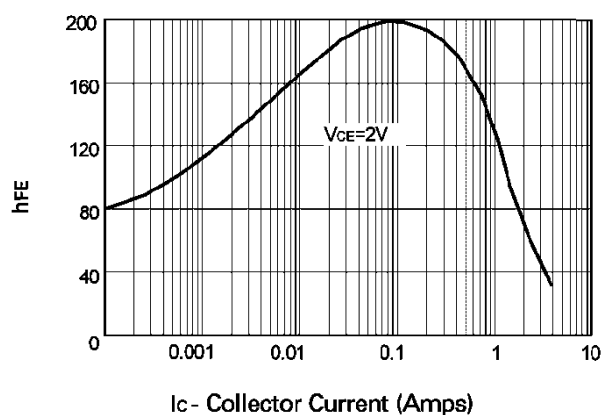
■ Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_C = 100 \mu A, I_E = 0$	25			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = 10 mA, I_B = 0$	20			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100 \mu A, I_C = 0$	5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 25 V, I_E = 0$			0.1	μA
		$V_{CB} = 25 V, I_E = 0, T_a = 150^\circ C$			10	
Emitter cut-off current	I_{EBO}	$V_{EB} = 5 V, I_C = 0$			10	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1 A, I_B = 100 mA$			0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 1 A, I_B = 100 mA$			1.2	
Base - emitter turn-on voltage	$V_{BE(on)}$	$V_{CE} = 1 V, I_C = 1 A$			1	
DC current gain	h_{FE}	$V_{CE} = 10 V, I_C = 5 mA$	50			
		$V_{CE} = 1 V, I_C = 500 mA$	85		375	
		$V_{CE} = 1 V, I_C = 1 A$	60			
		$V_{CE} = 1 V, I_C = 500 mA$	100		250	
		$V_{CE} = 1 V, I_C = 500 mA$	160		400	
Collector output capacitance	C_{ob}	$V_{CB} = 10 V, f = 1 MHz$			25	pF
Transition frequency	f_T	$V_{CE} = 5 V, I_C = 100 mA, f = 100 MHz$	100			MHz

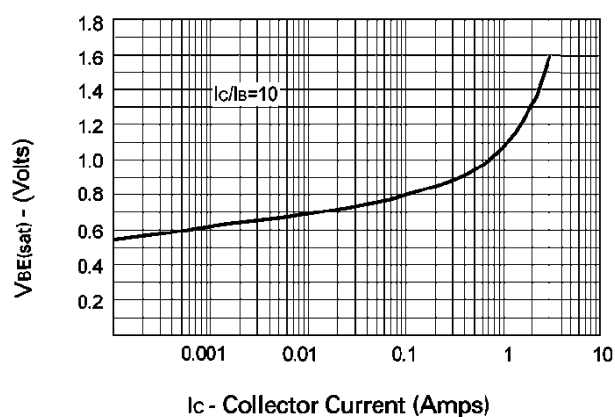
■ Typical Characteristics



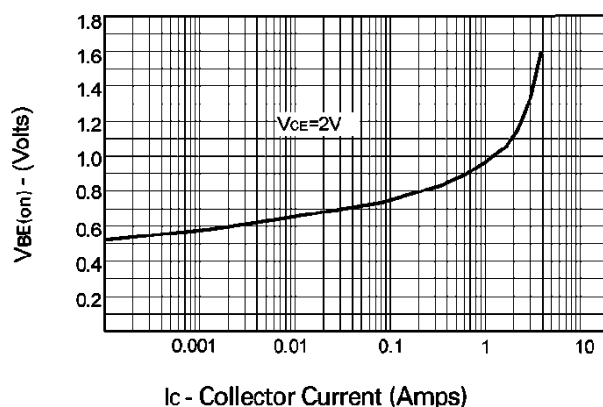
■ Typical Characteristics



$h_{FE} \text{ v } I_C$



$V_{BE(sat)} \text{ v } I_C$



$V_{BE(on)} \text{ v } I_C$