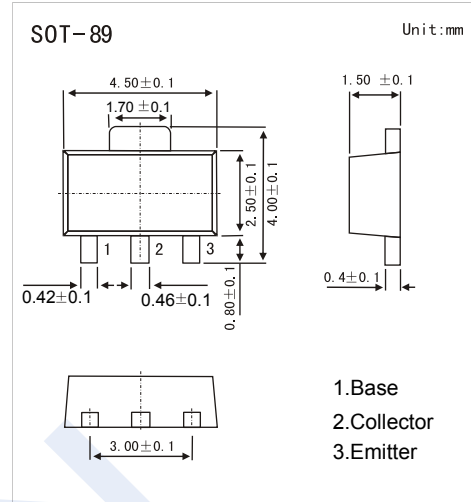


## NPN Transistors

### BCX68-HF (KCX68-HF)

#### ■ Features

- Collector Current Capability  $I_C=1A$
- Collector Emitter Voltage  $V_{CE0}=20V$
- High gain and low saturation voltages
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish



#### ■ 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 $T_a = 25^\circ C$

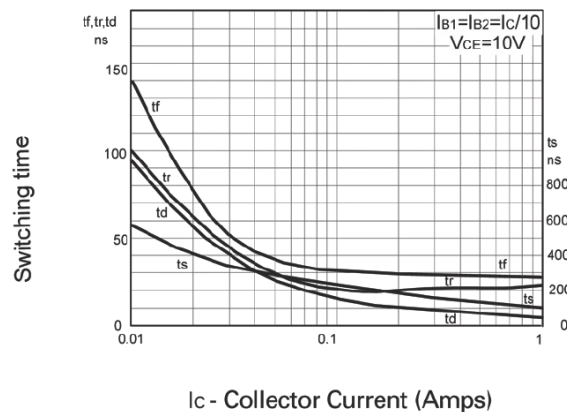
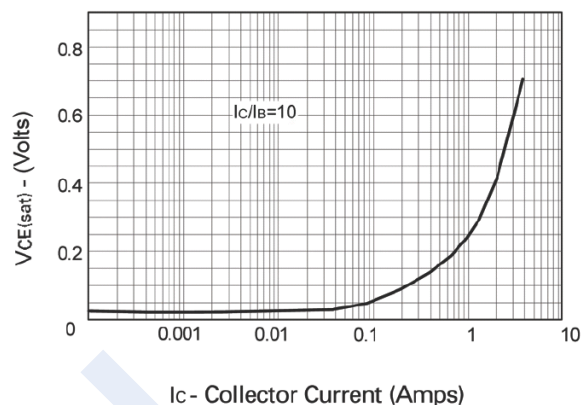
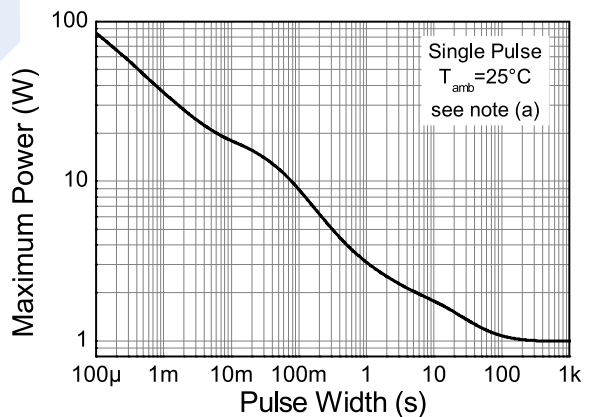
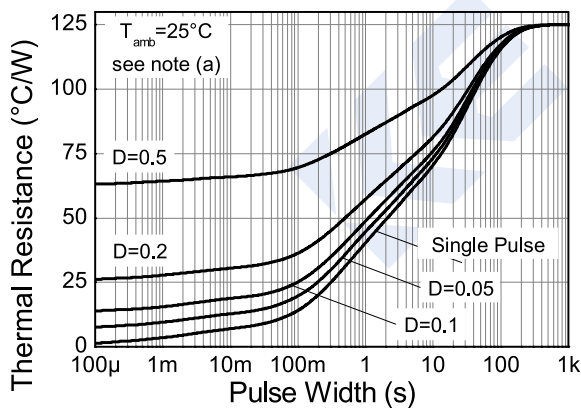
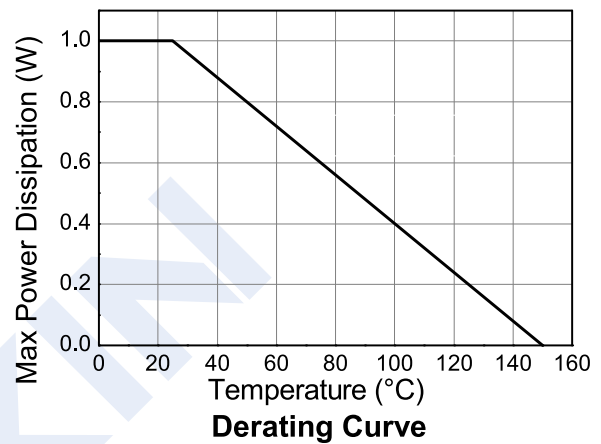
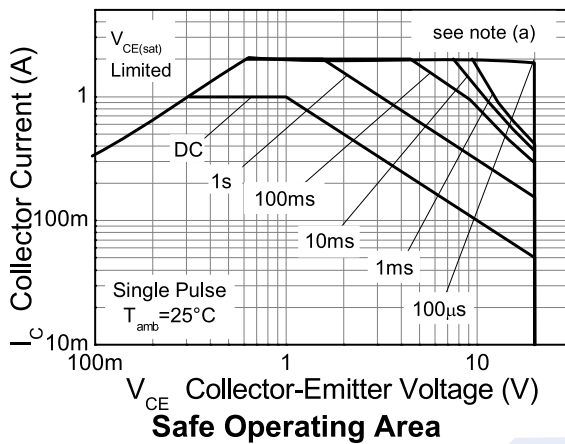
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CBO}$	$I_C = 100 \mu A, I_E = 0$	25			V
Collector- emitter breakdown voltage	$V_{CEO}$	$I_C = 10 mA, I_B = 0$	20			
Emitter - base breakdown voltage	$V_{EBO}$	$I_E = 100 \mu A, I_C = 0$	5			
Collector-base cut-off current	$I_{CBO}$	$V_{CB} = 25 V, I_E = 0$			0.1	uA
		$V_{CB} = 25 V, I_E = 0, T_a = 150^\circ C$			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

## NPN Transistors BCX68-HF (KCX68-HF)

■ Classification of hfe

Ttype	BCX68-HF	BCX68-16-HF	BCX68-25-HF
Rangel	85-375	100-250	160-400
Marking	CE <sub>F</sub>	CC <sub>F</sub>	CD <sub>F</sub>

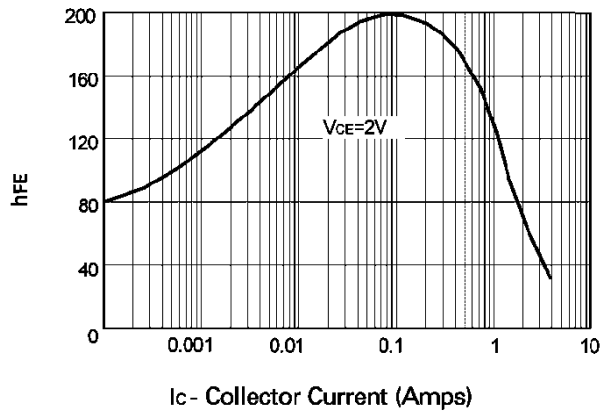
■ Typical Characteristics



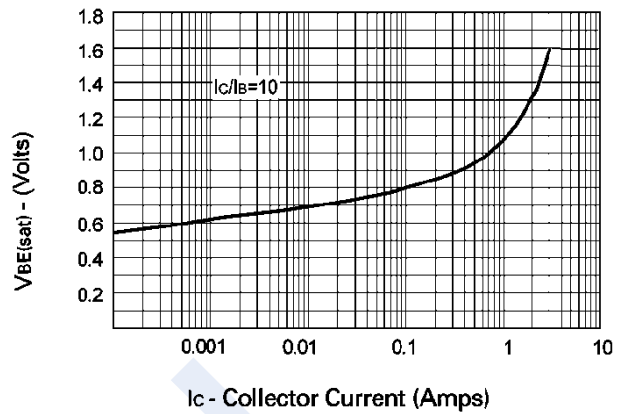
## NPN Transistors

### BCX68-HF (KCX68-HF)

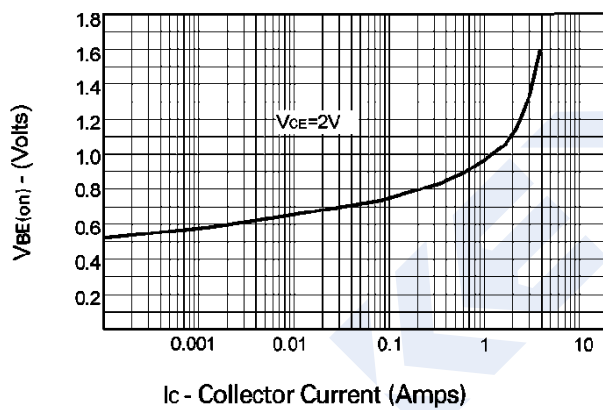
#### ■ Typical Characteristics



**$h_{FE}$  v  $I_C$**



**$V_{BE(sat)}$  v  $I_C$**



**$V_{BE(on)}$  v  $I_C$**