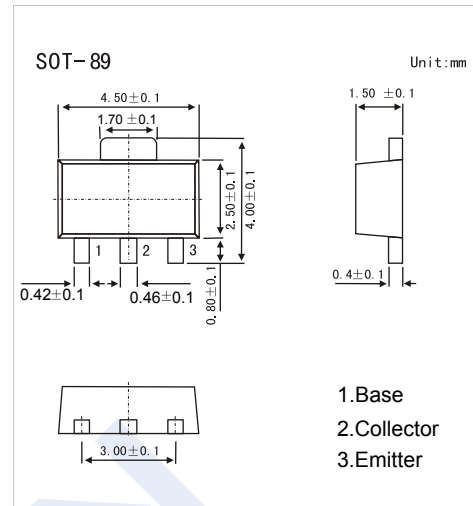


## PNP Transistors

### BCX69 (KCX69)

#### ■ Features

- For general AF applications
- High collector current
- High current gain
- Low collector-emitter saturation voltage
- Complementary type: BCX 68 (NPN)



#### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	-25	V
Collector - Emitter Voltage	$V_{CE0}$	-20	
Emitter - Base Voltage	$V_{EB0}$	-5	
Collector Current - Continuous	$I_C$	-1	A
Peak Collector Current	$I_{CM}$	-2	
Base Current	$I_B$	-100	mA
Peak Base Current	$I_{BM}$	-200	
Collector Power Dissipation	$P_C$	1	W
Thermal Resistance.Junction- to-Ambient	$R_{thJA}$	75	K/W
Thermal Resistance.Case-to-Sink Typ	$R_{thJS}$	20	
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature range	$T_{stg}$	-65 to 150	

## PNP Transistors

## BCX69 (KCX69)

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CB0}$	$I_c = -100\mu\text{A}, I_E = 0$	-25			V
Collector- emitter breakdown voltage	$V_{CE0}$	$I_c = -10\text{mA}, I_B = 0$	-20			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = -100\mu\text{A}, I_c = 0$	-5			
Collector-base cut-off current	$I_{cB0}$	$V_{CB} = -25\text{V}, I_E = 0$			-100	nA
Collector- base cut-off current $T_a = 150^\circ\text{C}$					-10	$\mu\text{A}$
Emitter cut-off current	$I_{EB0}$	$V_{EB} = -5\text{V}, I_c = 0$			-10	$\mu\text{A}$
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = -1\text{A}, I_B = -100\text{mA}$			-0.5	V
Base - emitter saturation voltage	$V_{BE}$	$I_c = -5\text{mA}, V_{CE} = -10\text{V}$		-0.6		
		$I_c = -1\text{A}, V_{CE} = -1\text{V}$			-1	
DC current gain		hFE	$V_{CE} = -10\text{V}, I_c = -5\text{mA}$	50		
			$V_{CE} = -1\text{V}, I_c = -500\text{mA}$	85		375
				85	100	160
				100	160	250
				160	250	375
	$I_c = -1\text{A}, V_{CE} = -1\text{V}$	60				
Transition frequency	$f_T$	$V_{CE} = -5\text{V}, I_c = -100\text{mA}, f = 20\text{MHz}$		100		MHz

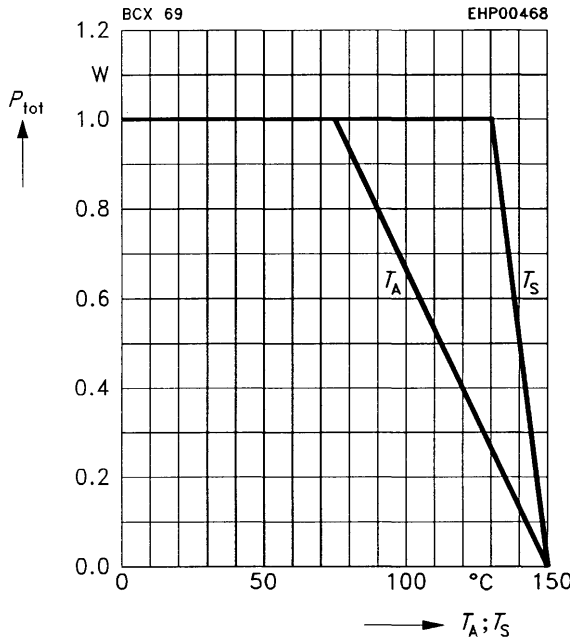
## ■ Classification of hfe(2)

Marking	BCX69	BCX69-10	BCX69-16	BCX69-25
Range	CE	CF	CG	CH

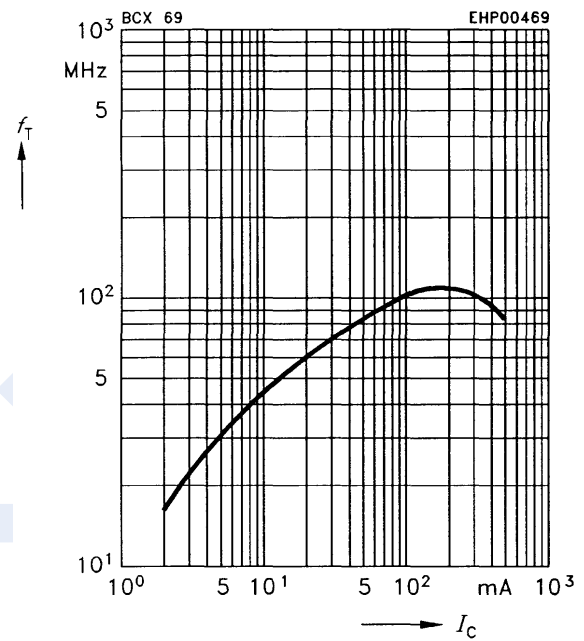
## PNP Transistors BCX69 (KCX69)

■ Typical Characteristics

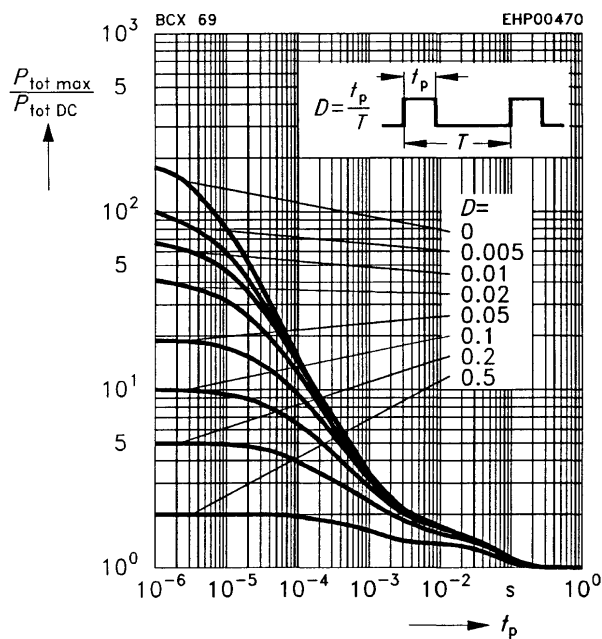
**Total power dissipation**  $P_{tot} = f(T_A^*; T_S)$   
\* Package mounted on epoxy



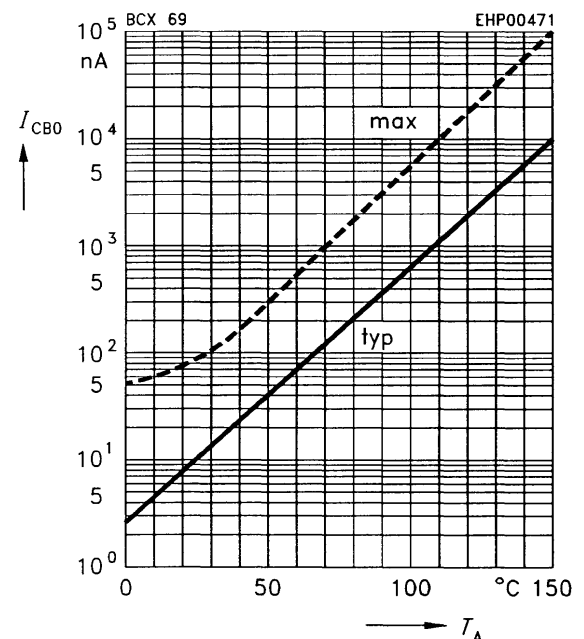
**Transition frequency**  $f_T = f(I_C)$   
 $V_{CE} = 5 V$



**Permissible pulse load**  $P_{tot max}/P_{tot DC} = f(t_p)$



**Collector cutoff current**  $I_{CB0} = f(T_A)$   
 $V_{CB} = 25 V$



### PNP Transistors

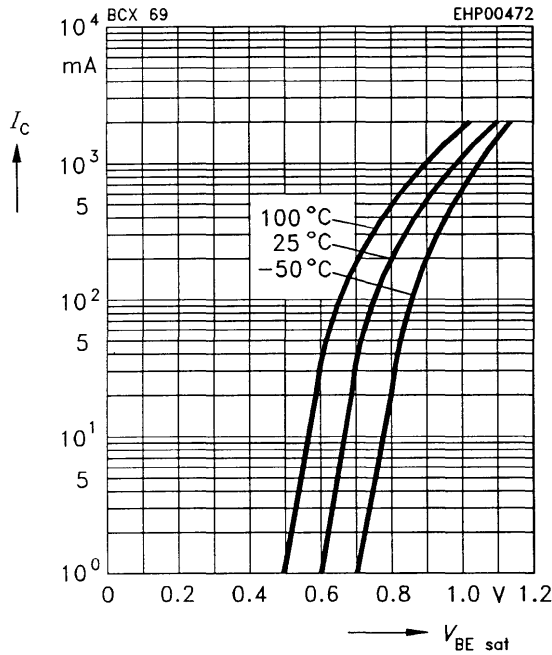
### BCX69 (KCX69)

■ Typical Characteristics

**Base-emitter saturation voltage**

$I_C = f(V_{BEsat})$

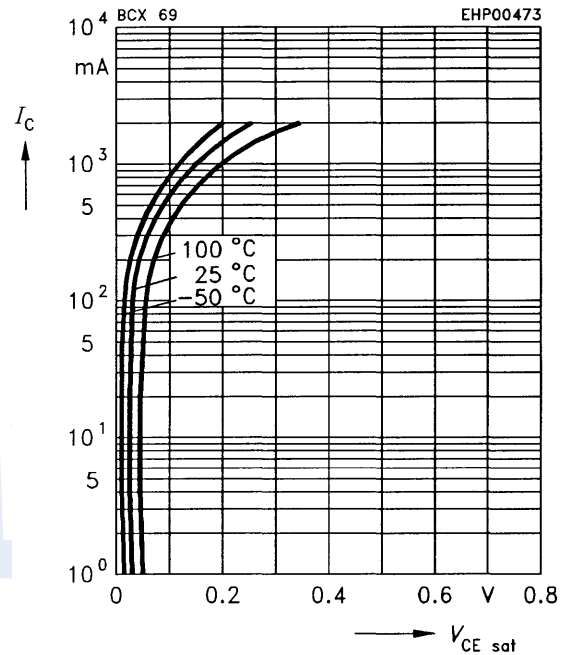
$h_{FE} = 10$



**Collector-emitter saturation voltage**

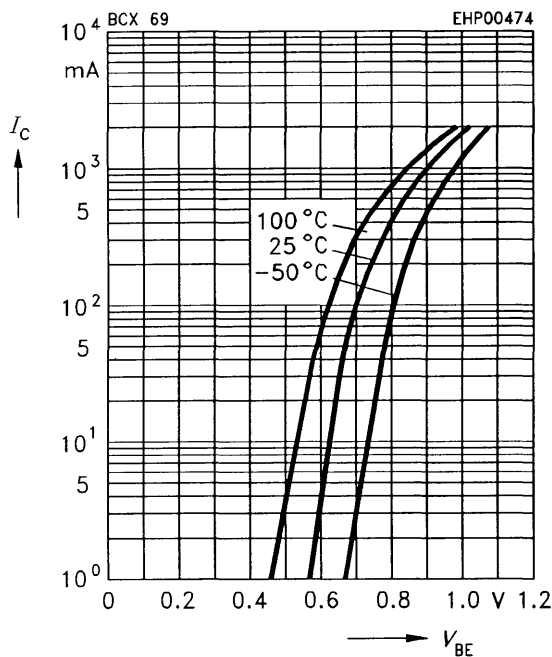
$I_C = f(V_{CEsat})$

$h_{FE} = 10$



**Collector current  $I_C = f(V_{BE})$**

$V_{CE} = 1 V$



**DC current gain  $h_{FE} = f(I_C)$**

$V_{CE} = 1 V$

