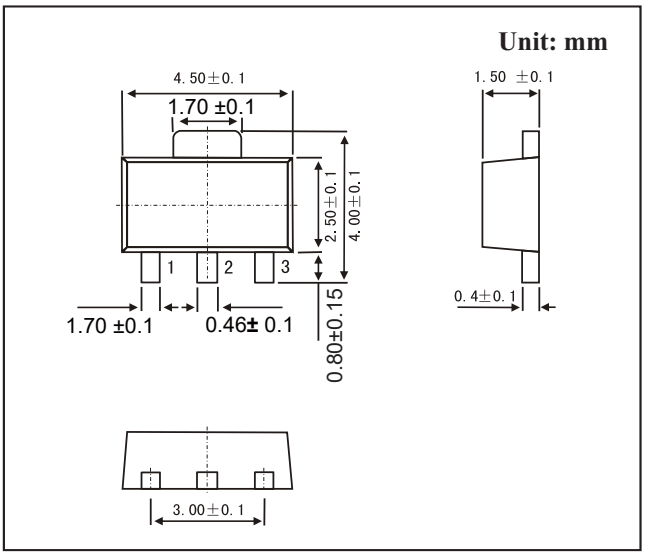
SOT-89 Plastic-Encapsulate Transistors

Features

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

MECHANICAL DATA

- Case style:SOT-89molded plastic
- Mounting position:any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

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
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	℃
Storage Temperature range	T_{stg}	-65 to 150	

PACKAGE INFORMATION

Device	Package	Shipping
BCX69 (KCX69)	SOT-89	1000/Tape&Reel

Parameter		Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage		V_{CBO}	I_C= -100μA, I_E=0	-25			V
Collector- emitter breakdown voltage		V_{CEO}	I_C= -10mA, I_B=0	-20			
Emitter - base breakdown voltage		V_{EBO}	I_E= -100μA, I_C=0	-5			
Collector-base cut-off current		I_{CBO}	V_{CB}= -25 V , I_E=0			-100	nA
Collector- base cut-off current Ta=150℃						-10	μA
Emitter cut-off current		I_{EBO}	V_{EB}= -5V , I_C=0			-10	μA
Collector-emitter saturation voltage		$V_{CE(sat)}$	I_C=-1A, I_B=-100mA			-0.5	V
Base - emitter saturation voltage		V_{BE}	I_C= -5mA, V_{CE}=-10V		-0.6		
			I_C= -1A, V_{CE}=-1V			-1	
DC current gain		h_{FE}	V_{CE}= -10V, I_C= -5mA	50			
	BCX 69		V_{CE}=- 1V, I_C= -500mA	85		375	
	BCX 69-10			85	100	160	
	BCX 69-16			100	160	250	
	BCX 69-25			160	250	375	
			I_C = -1 A, V_{CE} = -1 V	60			
Transition frequency		f_T	V_{CE}= -5V, I_C= -100mA,f=20MHz		100		MHz

■ Classification of $h_{fe(2)}$

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

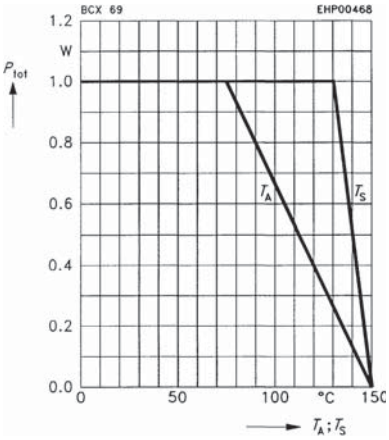
RATINGS AND CHARACTERISTIC CURVES

■ Typical Characterisitics

Total power dissipation

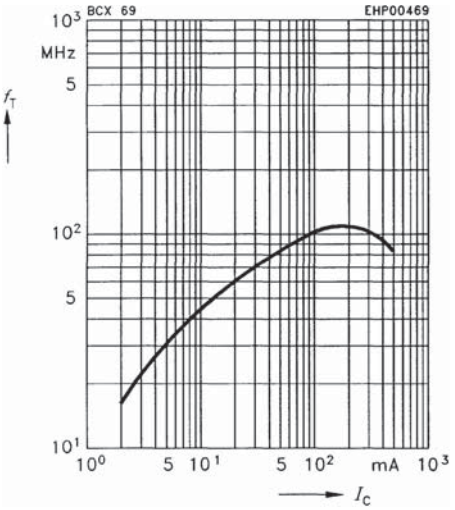
$P_{tot} = f(T_A^*; T_S)$

※Package mounted on epoxy



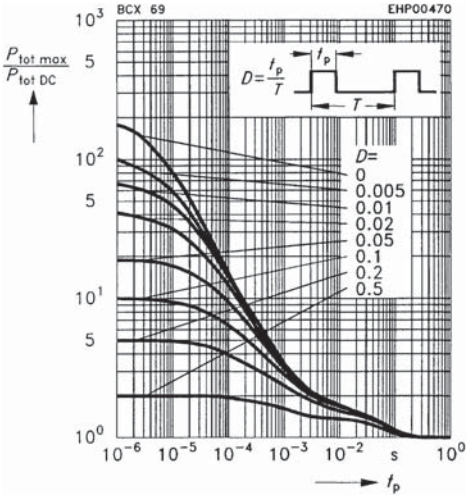
Transition frequency

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



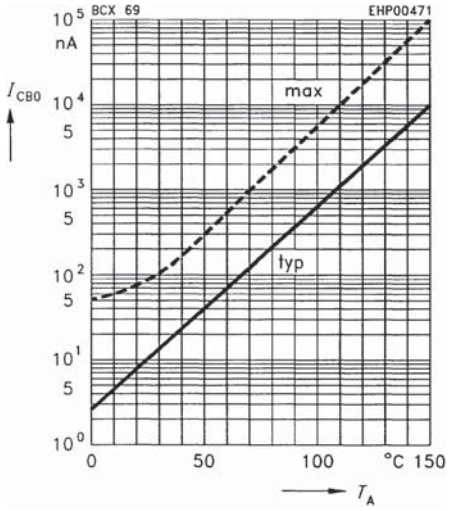
Permissible pulse load

$P_{tot\,max}/P_{tot\,DC} = f(t_p)$



Collector cutoff current

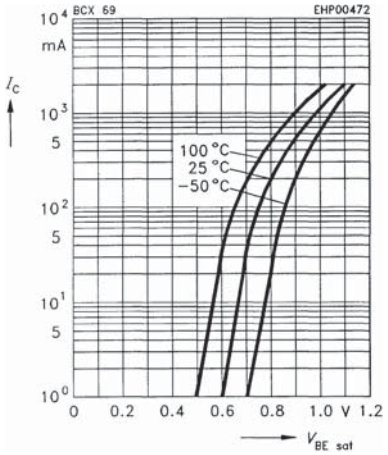
$I_{CB0} = f(T_A)$ V_{CB} = 25 V



Base-emitter saturation voltage

$I_C = f(V_{BEsat})$

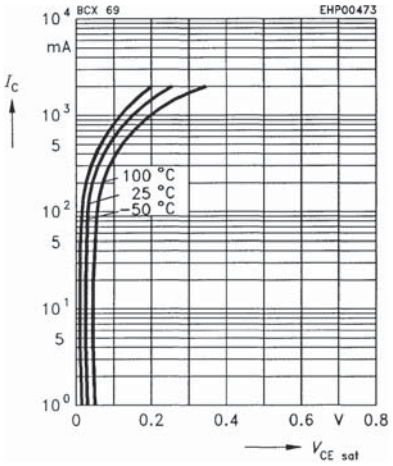
h_{FE} = 10



Collector-emitter saturation voltage

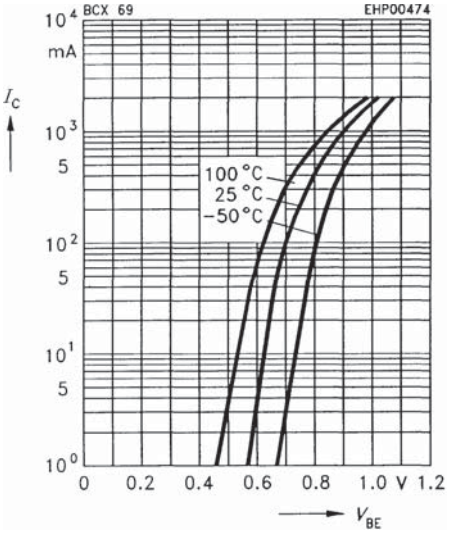
$I_C = f(V_{CEsat})$

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