Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

PNP Silicon AF Transistors

- For general AF applications

- High collector current

- High current gain

- Low collector-emitter saturation voltage

- Complementary type: BCX68 (NPN)

- Pb-free (RoHS compliant) package

- Qualified according AEC Q101
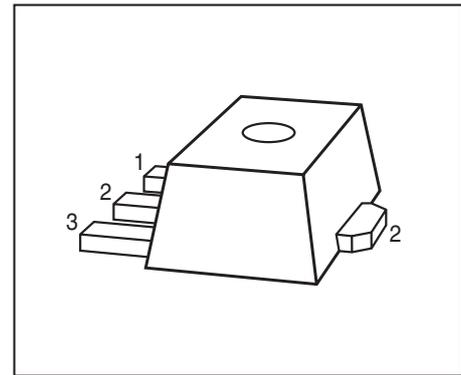
Type	Marking	Pin Configuration			Package
BCX69-10	CF	1=B	2=C	3=E	SOT89
BCX69-16	CG	1=B	2=C	3=E	SOT89
BCX69-25	CH	1=B	2=C	3=E	SOT89

Maximum Ratings

Parameter	Symbol	Value	Unit
Collector-emitter voltage	V_{CEO}	20	V
Collector-base voltage	V_{CBO}	25	
Emitter-base voltage	V_{EBO}	5	
Collector current	I_C	1	A
Peak collector current, $t_p \leq 10$ ms	I_{CM}	2	
Base current	I_B	100	mA
Peak base current	I_{BM}	200	
Total power dissipation- T_S = 114 °C	P_{tot}	3	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-65 ... 150	

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point[1]	R_{thJS}	≤ 12	K/W

[1]For calculation of R_{thJA} please refer to Application Note AN077 (Thermal Resistance Calculation)

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Electrical Characteristics at T_A = 25°C, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Collector-emitter breakdown voltage I_C = 30 mA, I_B = 0	$V_{(BR)CEO}$	20	-	-	V
Collector-base breakdown voltage I_C = 10 µA, I_E = 0	$V_{(BR)CBO}$	25	-	-	
Emitter-base breakdown voltage I_E = 1 µA, I_C = 0	$V_{(BR)EBO}$	5	-	-	
Collector-base cutoff current V_{CB} = 25 V, I_E = 0 V_{CB} = 25 V, I_E = 0 , T_A = 150	I_{CBO}	- -	- -	0.1 100	µA
DC current gain[1] I_C = 5 mA, V_{CE} = 10 V I_C = 500 mA, V_{CE} = 1 V, BCX69-10 I_C = 500 mA, V_{CE} = 1 V, BCX69-16 I_C = 500 mA, V_{CE} = 1 V, BCX69-25 I_C = 1 A, V_{CE} = 1 V	h_{FE}	50 85 100 160 60	- 100 160 250 -	- 160 250 375 -	-
Collector-emitter saturation voltage[1] I_C = 1 A, I_B = 100 mA	V_{CEsat}	-	-	0.5	V
Base-emitter voltage[1] I_C = 5 mA, V_{CE} = 10 V I_C = 1 A, V_{CE} = 1 V	$V_{BE(ON)}$	- -	0.6 -	- 1	
AC Characteristics					
Transition frequency I_C = 100 mA, V_{CE} = 5 V, f = 20 MHz	f_T	-	100	-	MHz

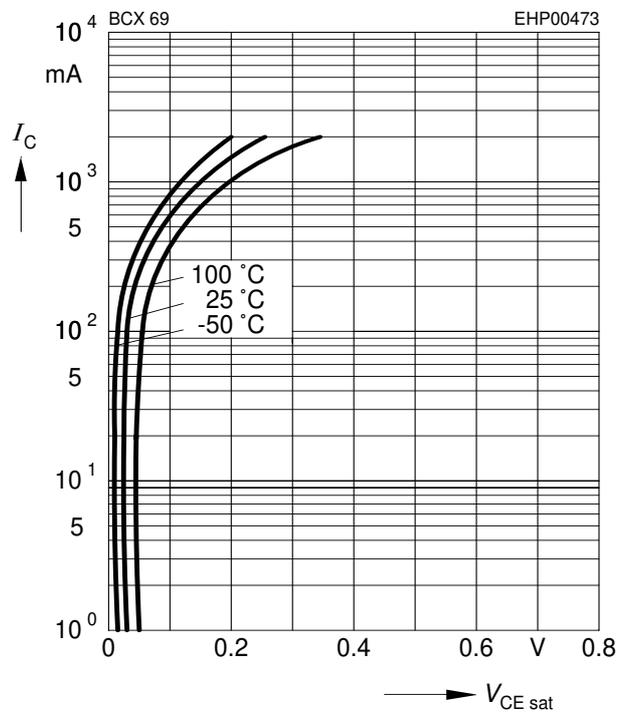[1]Pulse test: t < 300µs; D < 2%

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DC current gain $h_{FE} = f(I_C)$
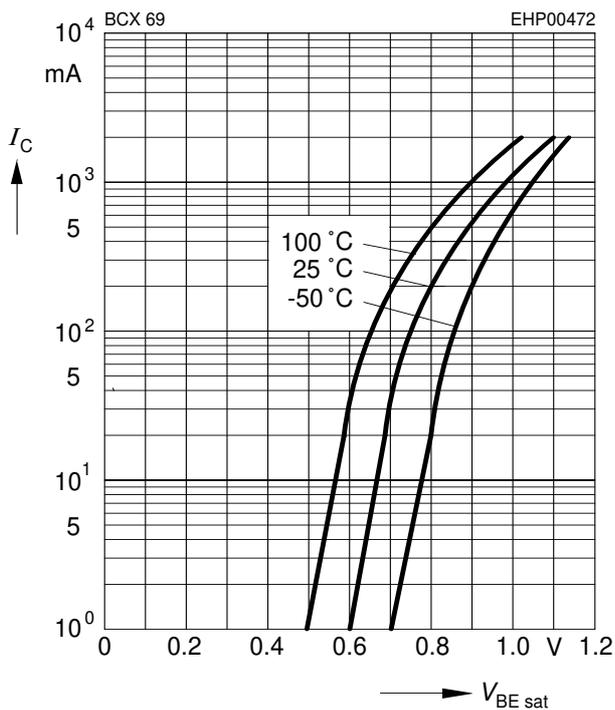
$V_{CE} = 1$ V
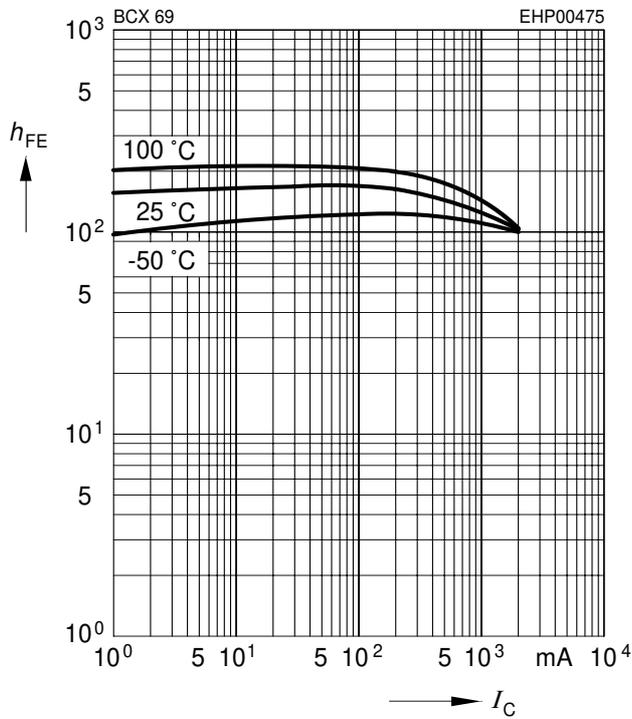
Collector-emitter saturation voltage

$I_C = f(V_{CEsat})$, $h_{FE} = 10$

Base-emitter saturation voltage
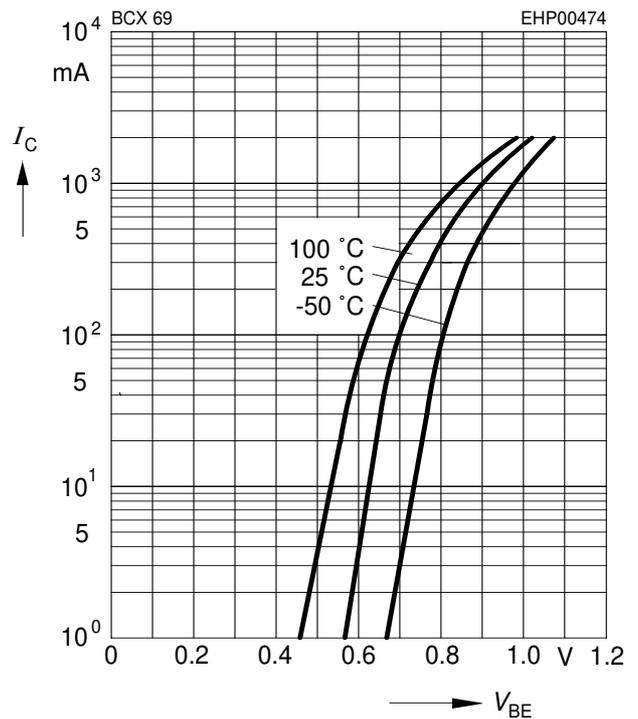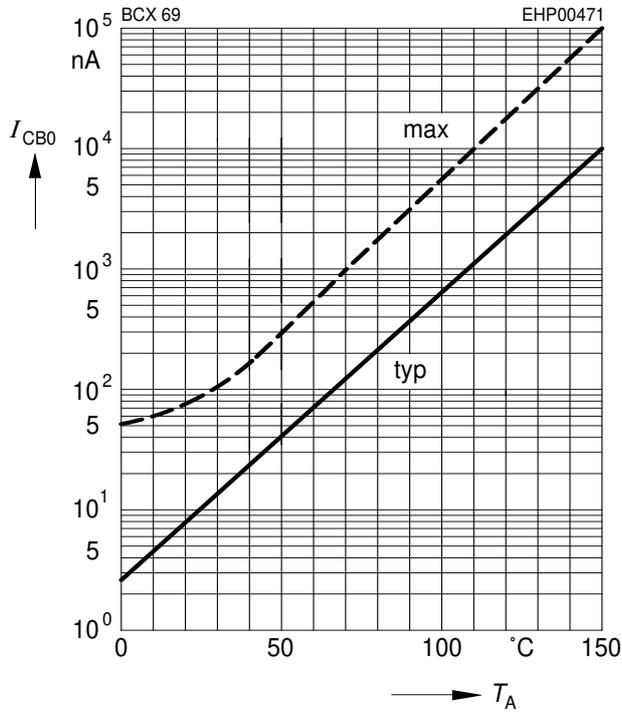
$I_C = f(V_{BEsat})$, $h_{FE} = 10$
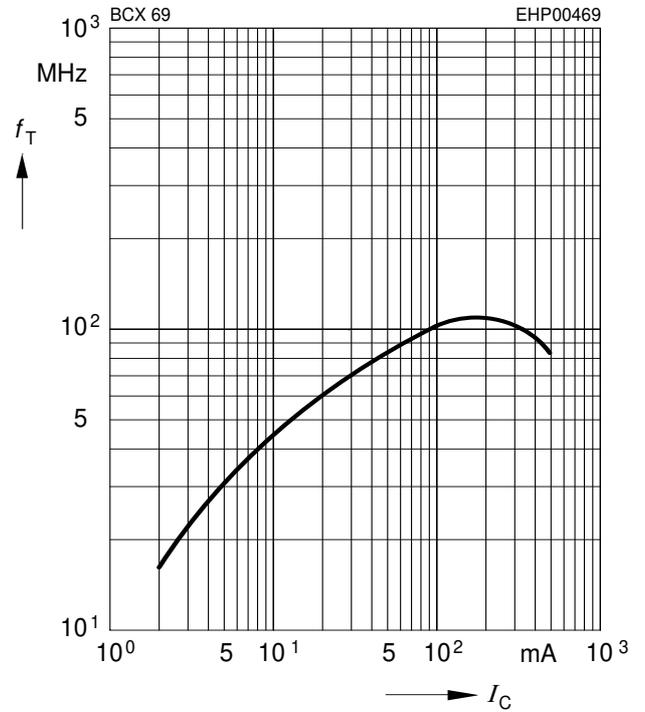
Collector current $I_C = f(V_{BE})$

$V_{CE} = 1$V

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Collector cutoff current $I_{CBO} = f(T_A)$

V_{CB} = 25 V

Transition frequency $f_T = f(I_C)$

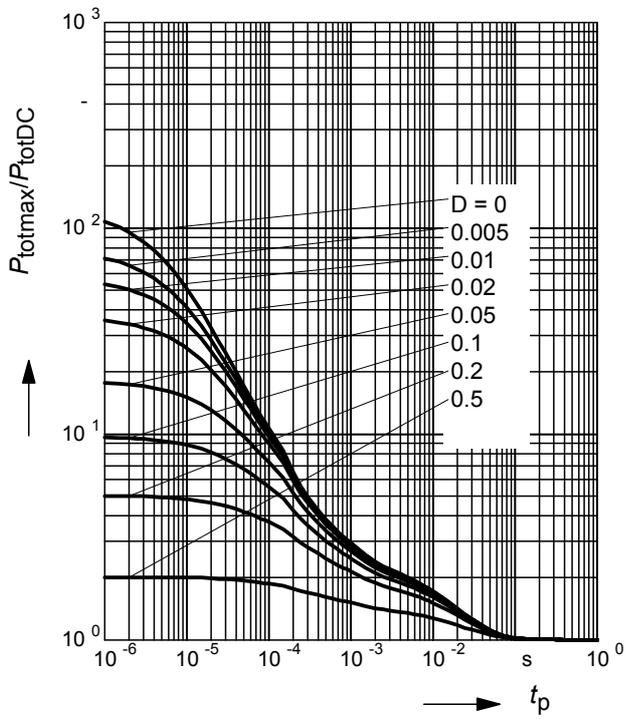V_{CE} = 5 V

Total power dissipation $P_{tot} = f(T_S)$
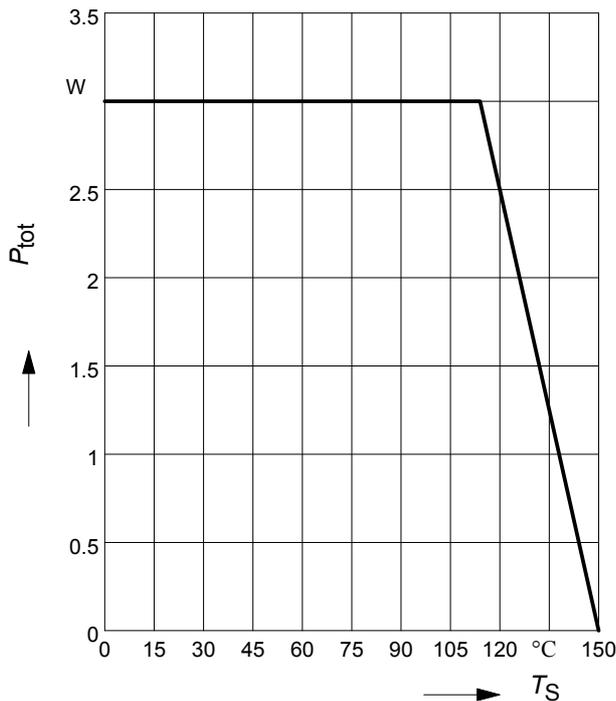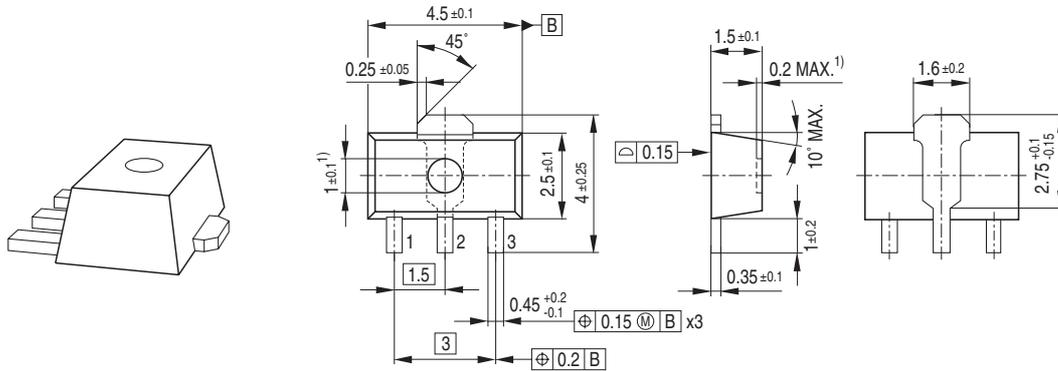
Permissible Pulse Load $R_{thJS} = f(t_p)$

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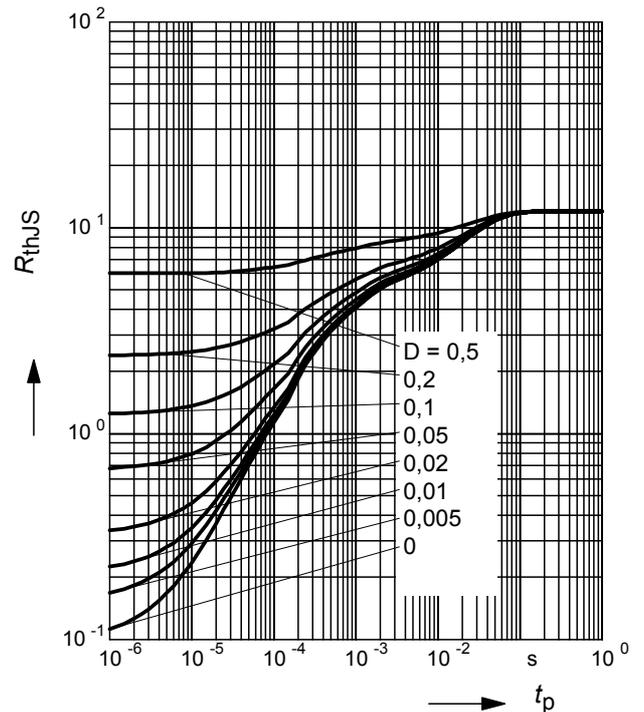
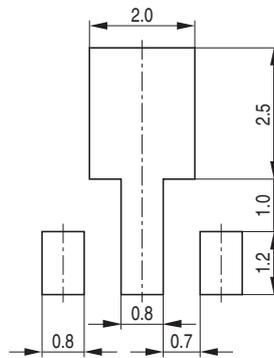**Permissible Pulse Load**

$P_{totmax}/P_{totDC} = f(t_p)$

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Package Outline

1) Ejector pin markings possible

Foot Print

Marking Layout (Example)

BAW78D
Type code

Pin 1

2005, June
Date code (YM)

(Infineon

Manufacturer
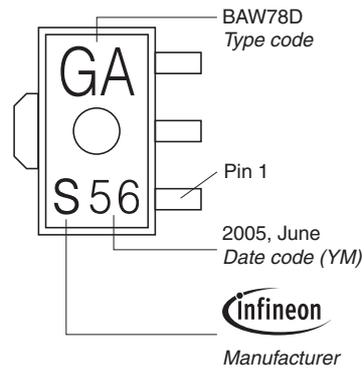
Standard Packing

Reel ø180 mm = 1.000 Pieces/Reel
Reel ø330 mm = 4.000 Pieces/Reel
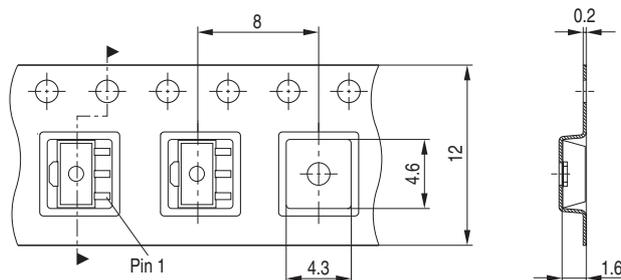
Pin 1

Edition 2009-11-16

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