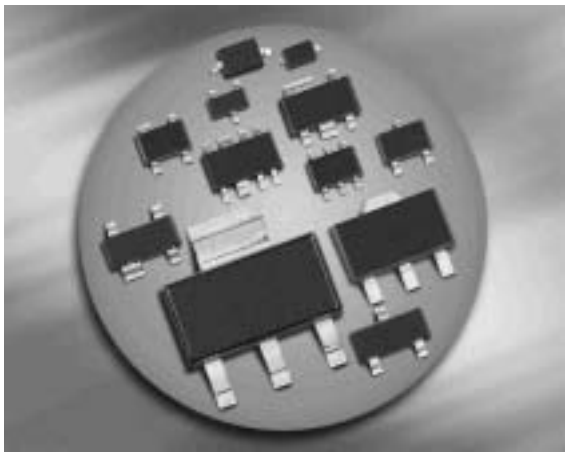
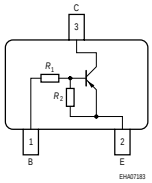
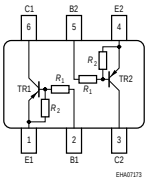
PNP Silicon Digital Transistor



- Switching circuit, inverter, interface circuit, driver circuit
- Built in bias resistor (R_1 = 10 kΩ , R_2 = 10 kΩ)
- BCR183S / U: Two internally isolated transistors with good matching in one multichip package
- BCR183S / U: For orientation in reel see package information below
- Pb-free (RoHS compliant) package [1)]
- Qualified according AEC Q101

BCR183/F **BCR183S/U**
BCR183W





Type	Marking	Pin Configuration						Package
BCR183	WMs	1=B	2=E	3=C	-	-	-	SOT23
BCR183F	WMs	1=B	2=E	3=C	-	-	-	TSFP-3
BCR183S	WMs	1=E1	2=B1	3=C2	4=E2	5=B2	6=C1	SOT363
BCR183U	WMs	1=E1	2=B1	3=C2	4=E2	5=B2	6=C1	SC74
BCR183W	WMs	1=B	2=E	3=C	-	-	-	SOT323

[1]Pb-containing package may be available upon special request

Maximum Ratings

Parameter	Symbol	Value	Unit
Collector-emitter voltage	V_{CEO}	50	V
Collector-base voltage	V_{CBO}	50	
Input forward voltage	$V_{i(fwd)}$	40	
Input reverse voltage	$V_{i(rev)}$	10	
Collector current	I_C	100	mA
Total power dissipation-	P_{tot}		mW
BCR183, $T_S \leq 102°C$		200	
BCR183F, $T_S \leq 128°C$		250	
BCR183S, $T_S \leq 115°C$		250	
BCR183U, $T_S \leq 118°C$		250	
BCR183W, $T_S \leq 124°C$		250	
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-65 ... 150	

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point[1)]	R_{thJS}		K/W
BCR183		≤ 240	
BCR183F		≤ 90	
BCR183S		≤ 140	
BCR183U		≤ 133	
BCR183W		≤ 105	

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

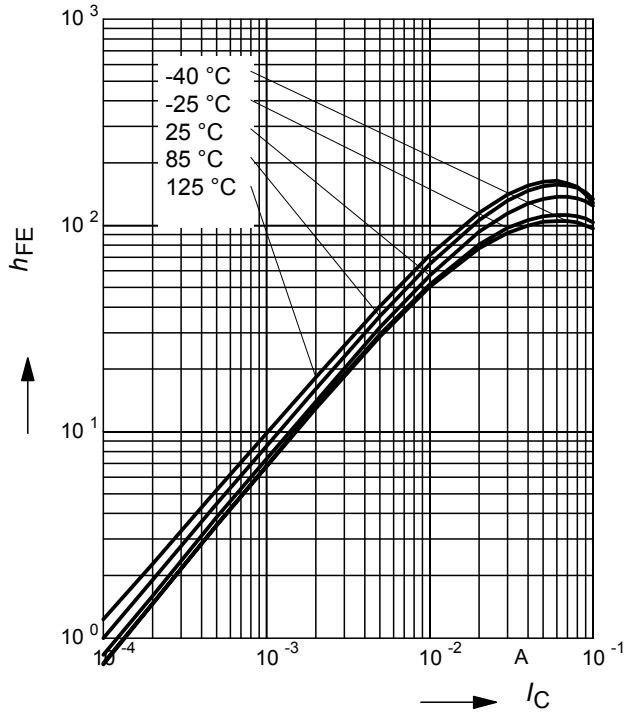
Electrical Characteristics at T_A = 25°C, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Collector-emitter breakdown voltage I_C = 100 µA, I_B = 0	$V_{(BR)CEO}$	50	-	-	V
Collector-base breakdown voltage I_C = 10 µA, I_E = 0	$V_{(BR)CBO}$	50	-	-	
Collector-base cutoff current V_{CB} = 40 V, I_E = 0	I_{CBO}	-	-	100	nA
Emitter-base cutoff current V_{EB} = 10 V, I_C = 0	I_{EBO}	-	-	0.75	mA
DC current gain[1)] I_C = 5 mA, V_{CE} = 5 V	h_{FE}	30	-	-	-
Collector-emitter saturation voltage[1)] I_C = 10 mA, I_B = 0.5 mA	V_{CEsat}	-	-	0.3	V
Input off voltage I_C = 100 µA, V_{CE} = 5 V	$V_{i(off)}$	0.8	-	1.8	
Input on voltage I_C = 2 mA, V_{CE} = 0.3 V	$V_{i(on)}$	1	-	2.5	
Input resistor	R_1	7	10	13	kΩ
Resistor ratio	R_1/R_2	0.9	1	1.1	-
AC Characteristics					
Transition frequency I_C = 10 mA, V_{CE} = 5 V, f = 100 MHz	f_T	-	200	-	MHz
Collector-base capacitance V_{CB} = 10 V, f = 1 MHz	C_{cb}	-	3	-	pF

[1]Pulse test: t < 300µs; D < 2%

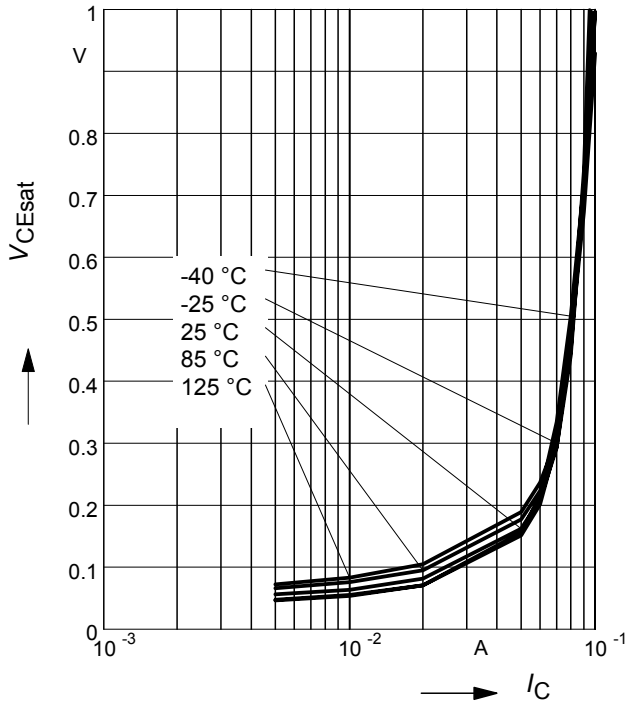
DC current gain h_{FE} = $f(I_C)$

V_{CE} = 5 V (common emitter configuration)



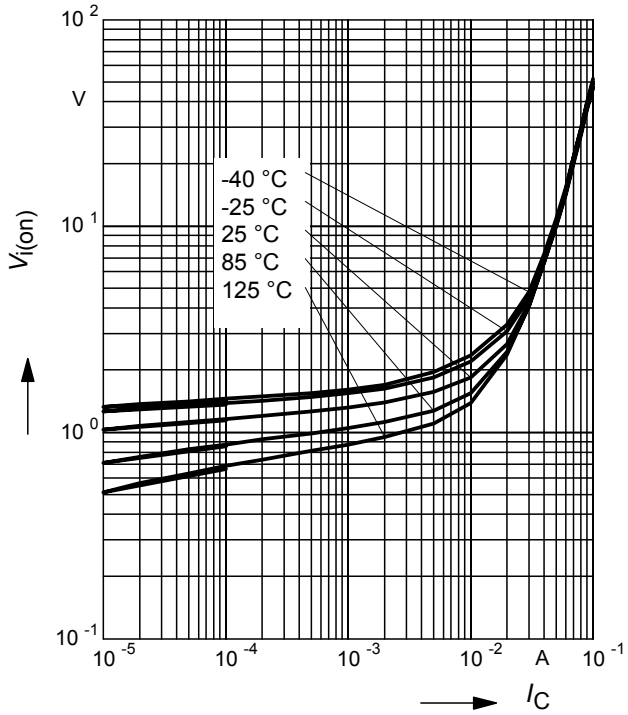
Collector-emitter saturation voltage

V_{CEsat}= $f(I_C)$, I_C/I_B = 20



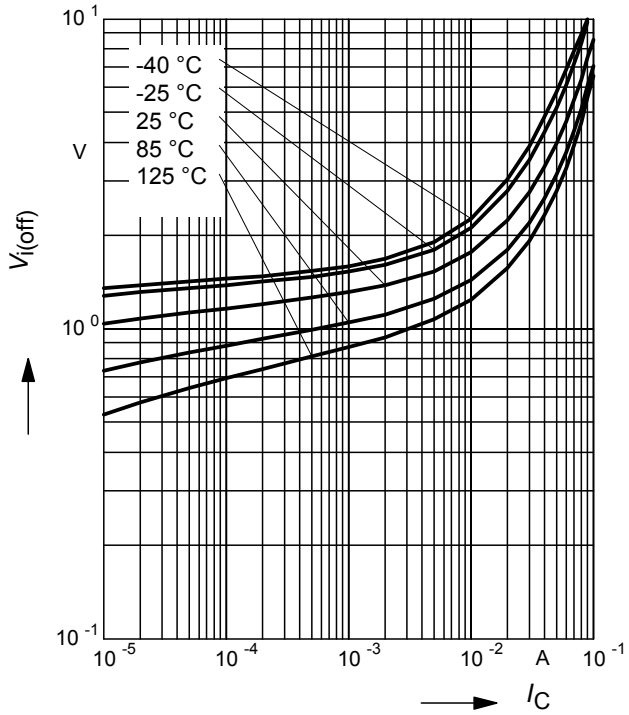
Input on Voltage $V_{i(on)}$ = $f(I_C)$

V_{CE} = 0.3V (common emitter configuration)

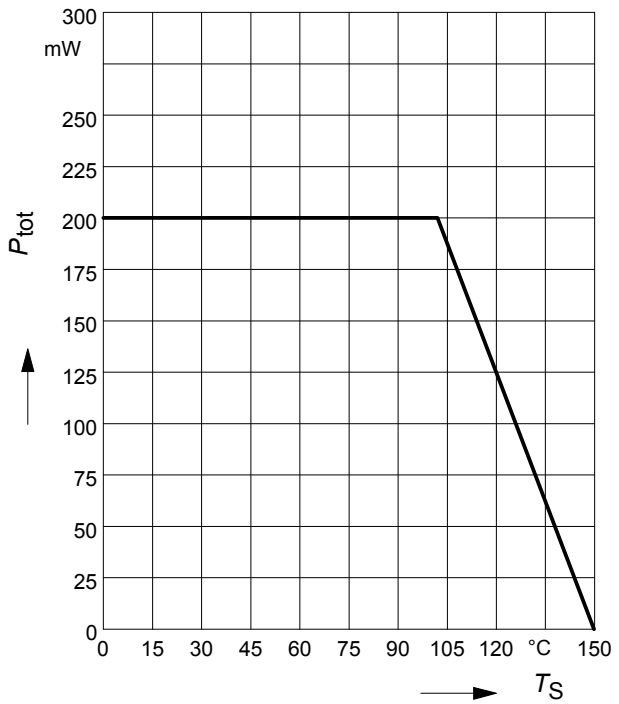


Input off voltage $V_{i(off)}$ = $f(I_C)$

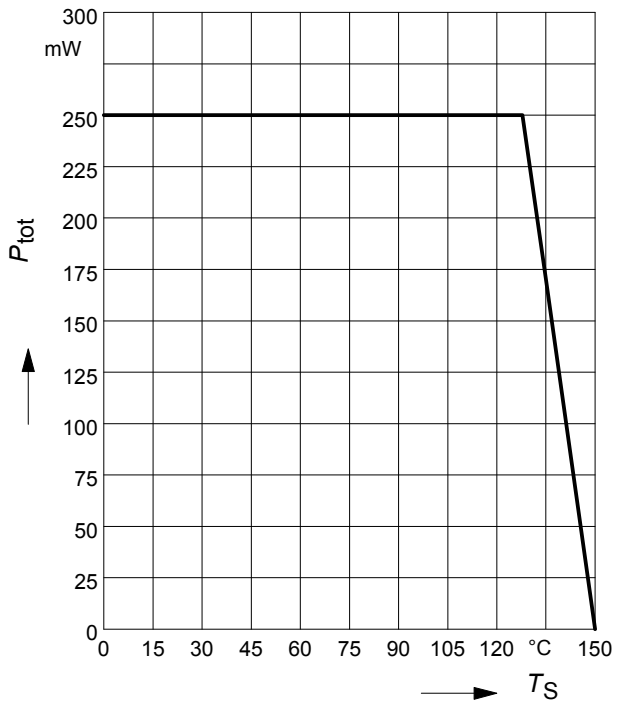
V_{CE} = 5V (common emitter configuration)



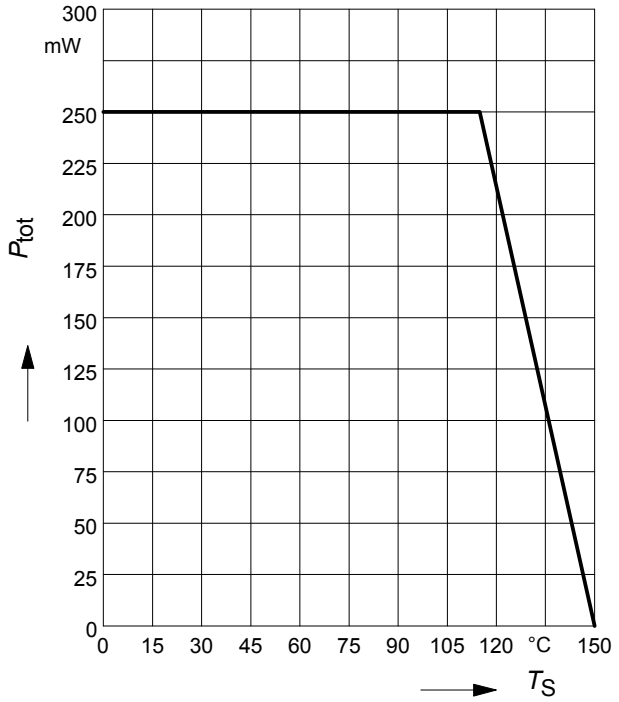
Total power dissipation $P_{tot} = f(T_S)$
BCR183



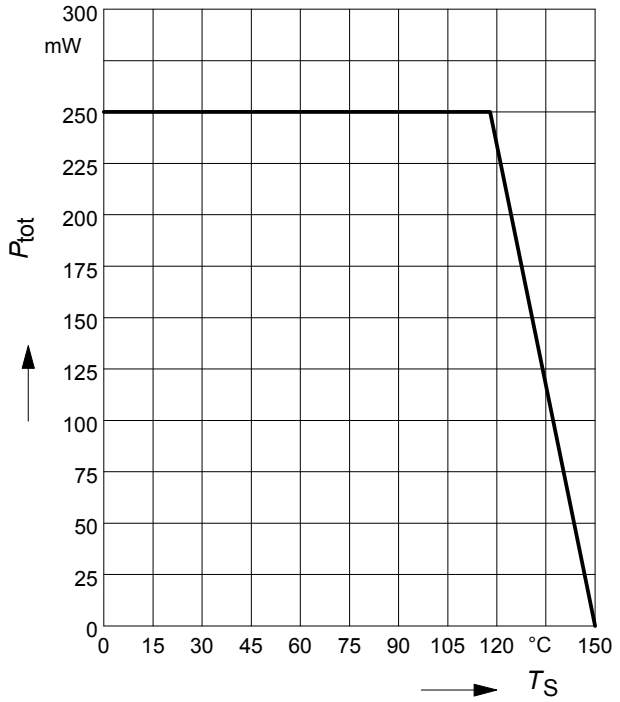
Total power dissipation $P_{tot} = f(T_S)$
BCR183F



Total power dissipation $P_{tot} = f(T_S)$
BCR183S

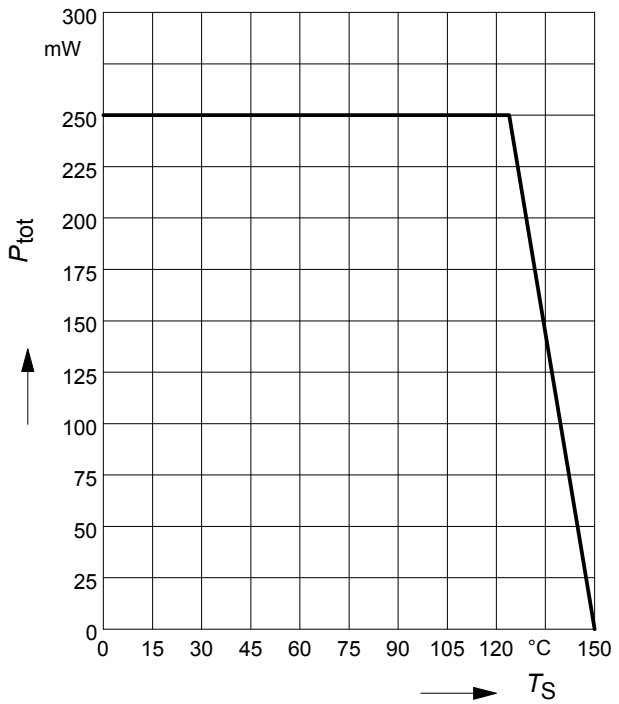


Total power dissipation $P_{tot} = f(T_S)$
BCR183U



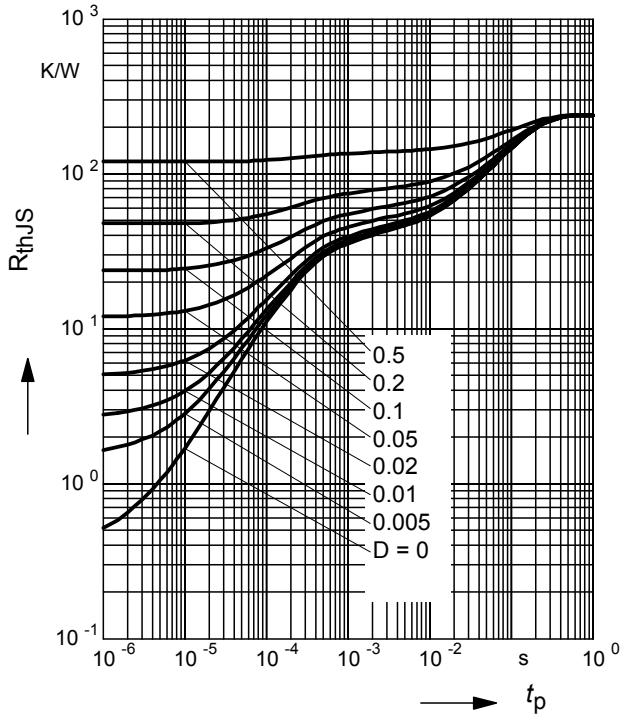
Total power dissipation $P_{tot} = f(T_S)$

BCR183W



Permissible Pulse Load $R_{thJS} = f(t_p)$

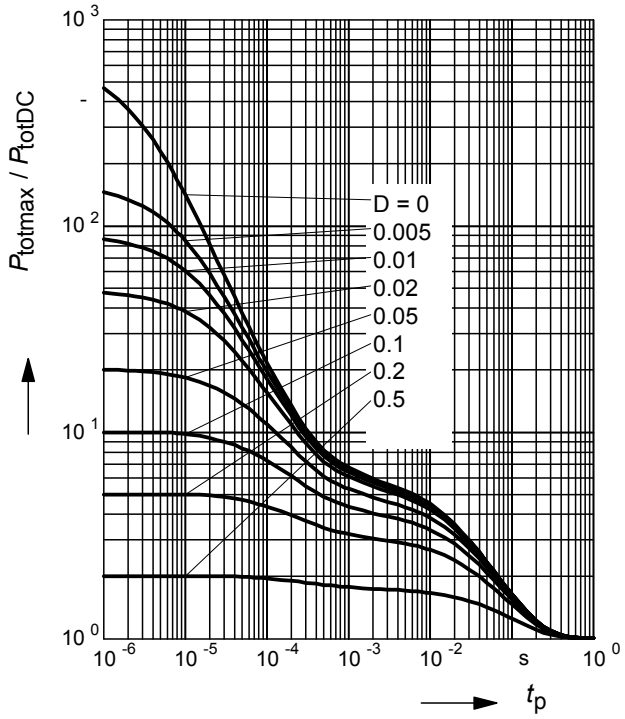
BCR183



Permissible Pulse Load

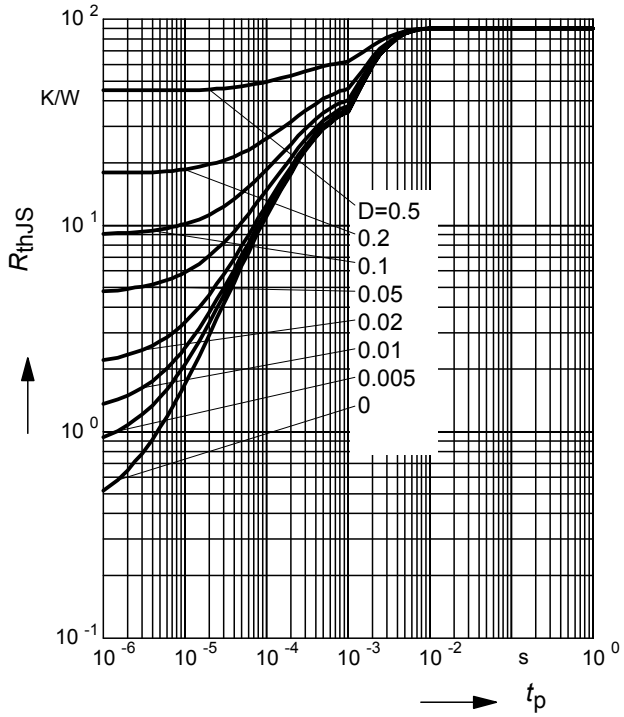
$P_{totmax}/P_{totDC} = f(t_p)$

BCR183



Permissible Puls Load $R_{thJS} = f(t_p)$

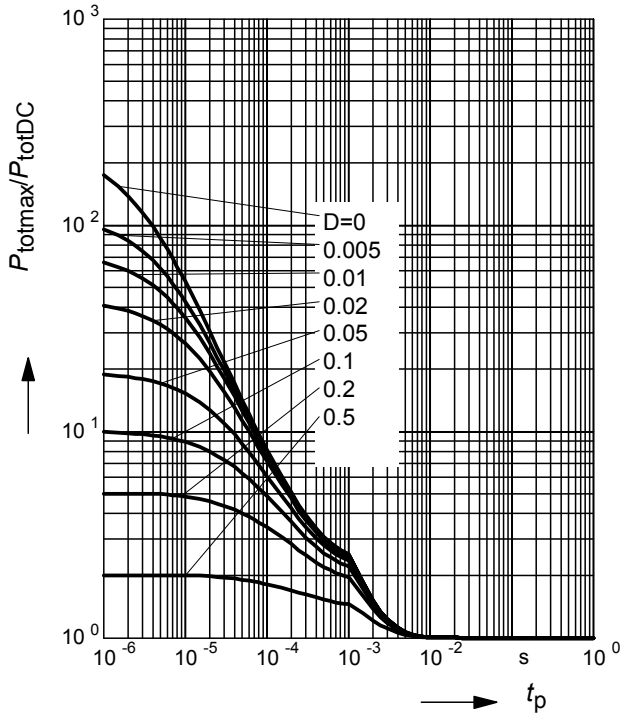
BCR183F



Permissible Pulse Load

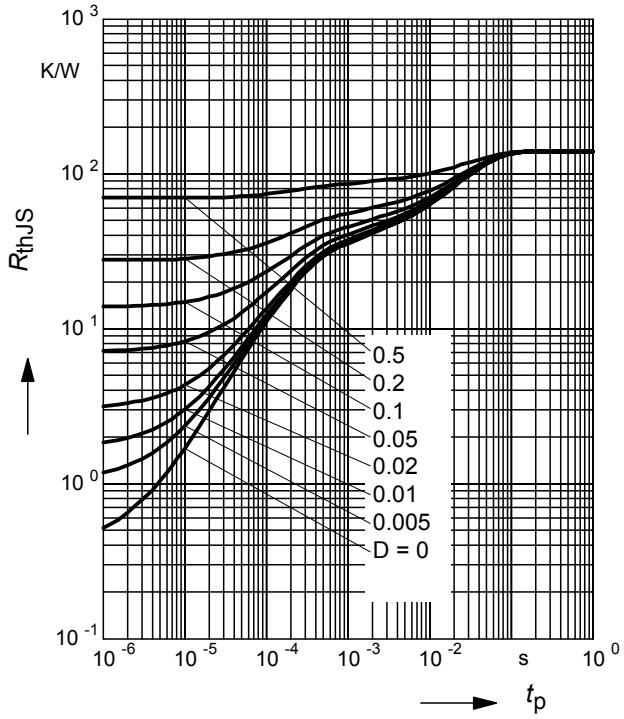
$P_{totmax}/P_{totDC} = f(t_p)$

BCR183F



Permissible Puls Load $R_{thJS} = f(t_p)$

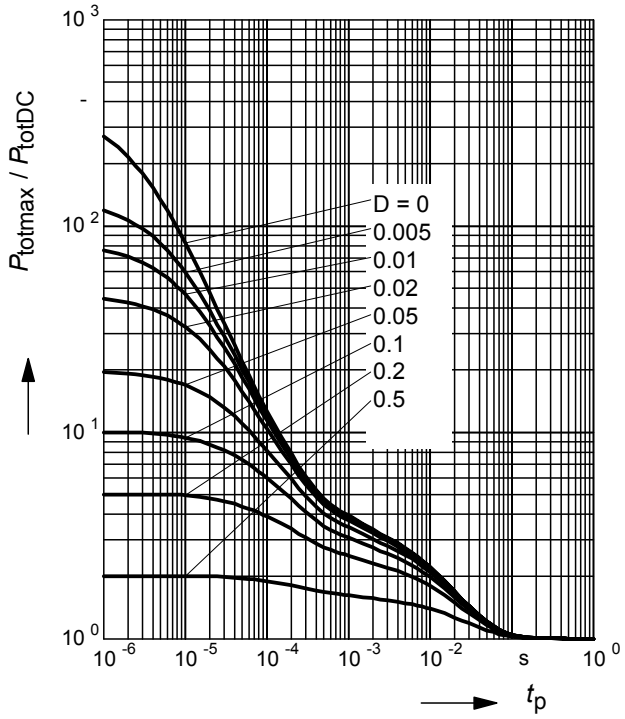
BCR183S



Permissible Pulse Load

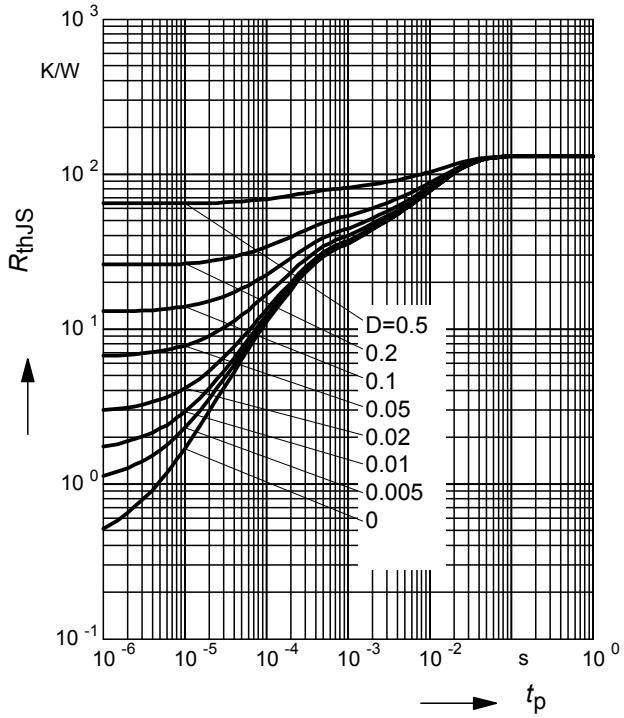
$P_{totmax}/P_{totDC} = f(t_p)$

BCR183S



Permissible Puls Load $R_{thJS} = f(t_p)$

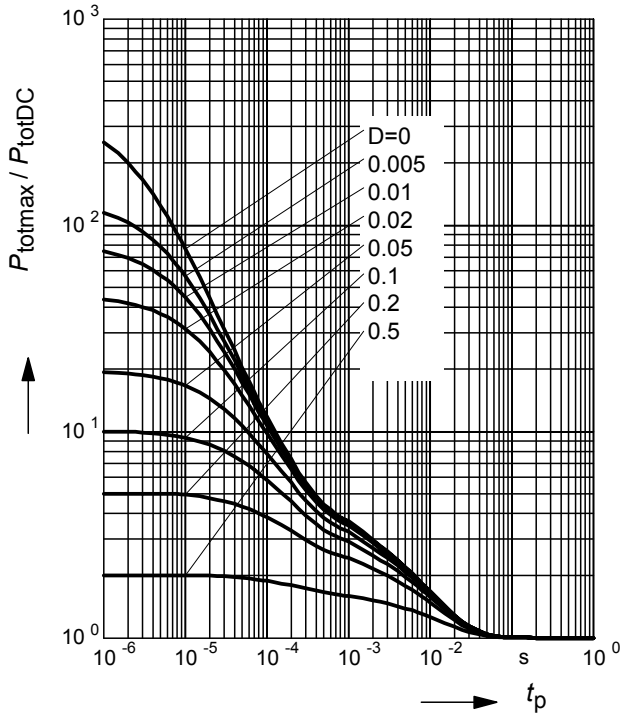
BCR183U



Permissible Pulse Load

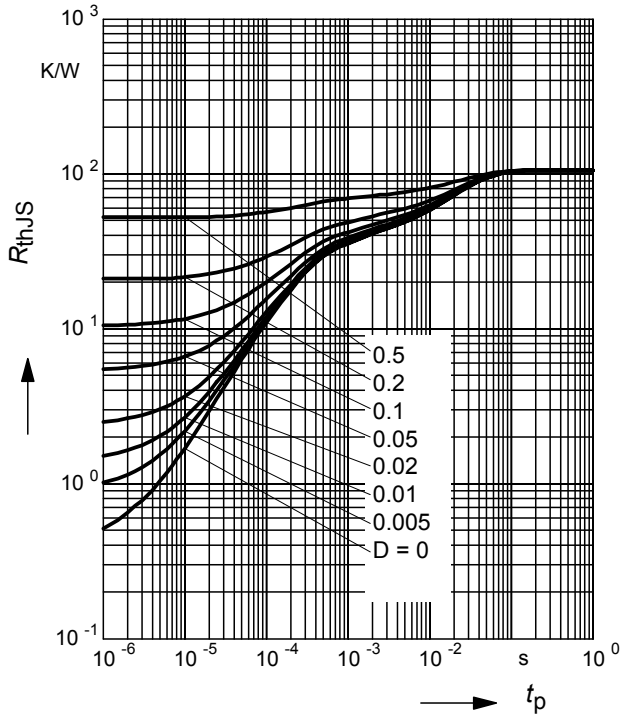
$P_{totmax}/P_{totDC} = f(t_p)$

BCR185U



Permissible Puls Load $R_{thJS} = f(t_p)$

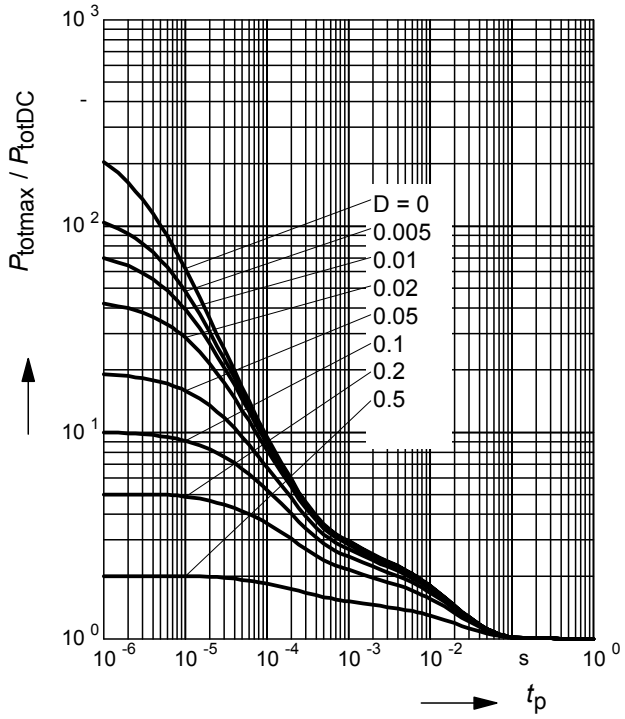
BCR183W



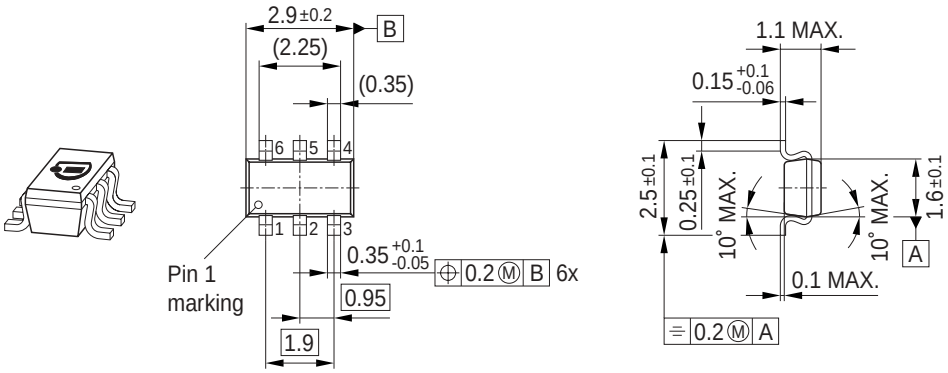
Permissible Pulse Load

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

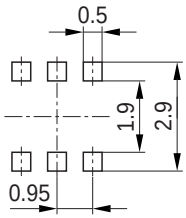
BCR183W



Package Outline

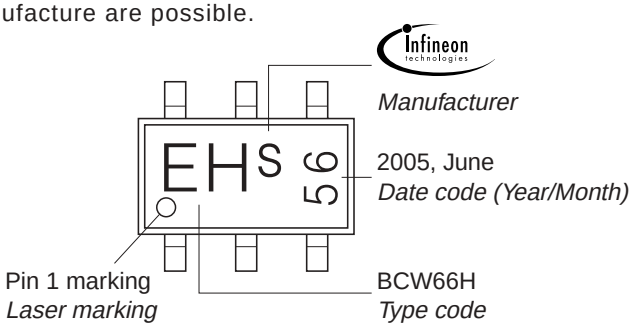


Foot Print



Marking Layout (Example)

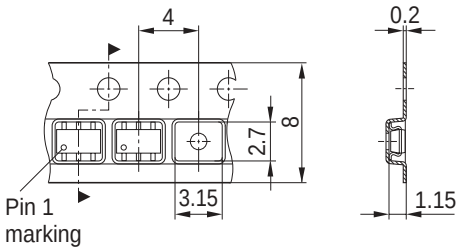
Small variations in positioning of
Date code, Type code and Manufacture are possible.



Standard Packing

Reel ø180 mm = 3.000 Pieces/Reel
Reel ø330 mm = 10.000 Pieces/Reel

For symmetric types no defined Pin 1 orientation in reel.



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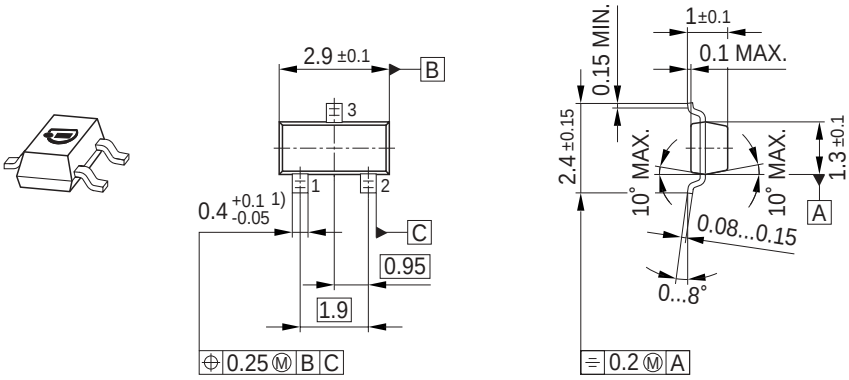
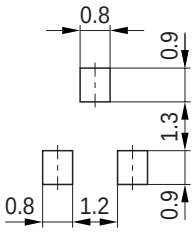


1) Lead width can be 0.6 max. in dambar area

Foot Print



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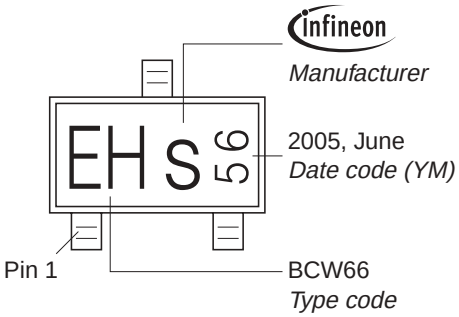

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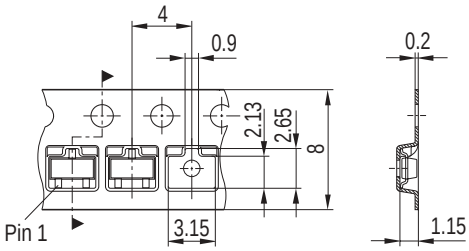
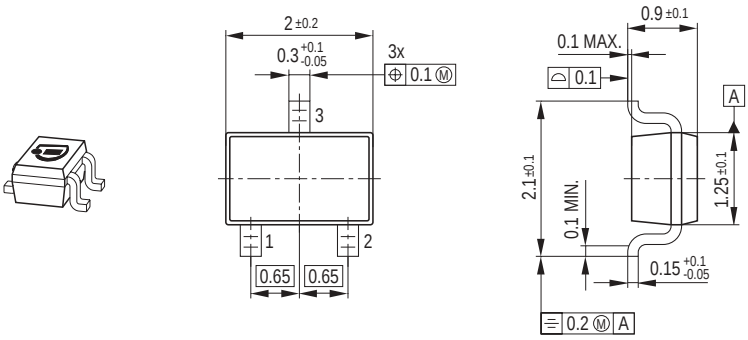


Package Outline



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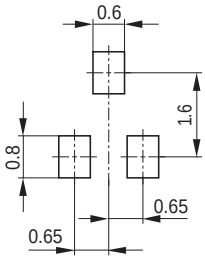

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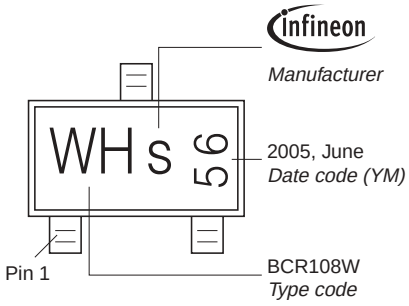

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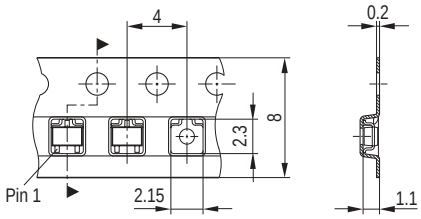
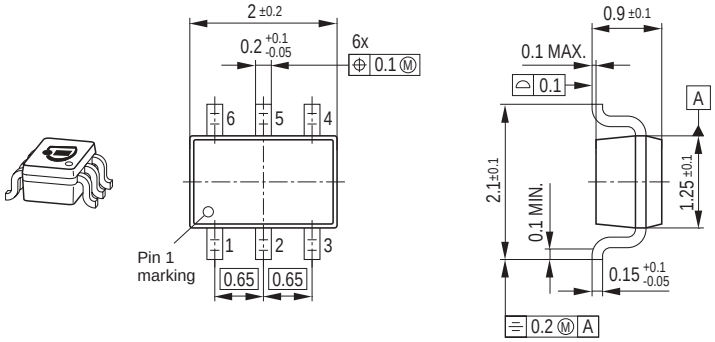


Package Outline



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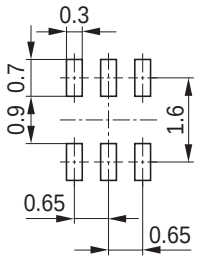

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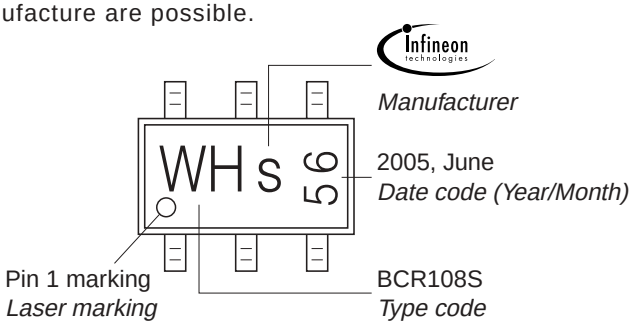

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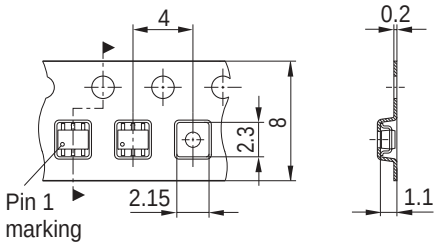
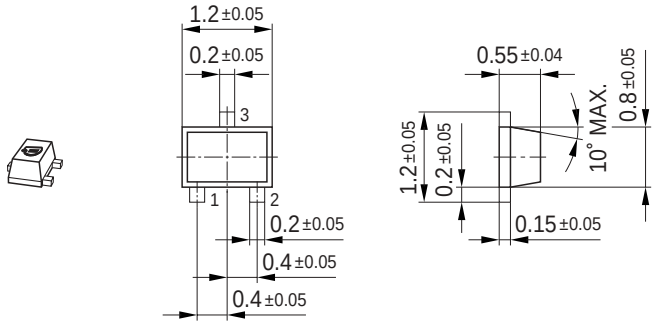


Package Outline



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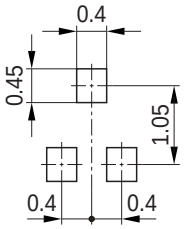
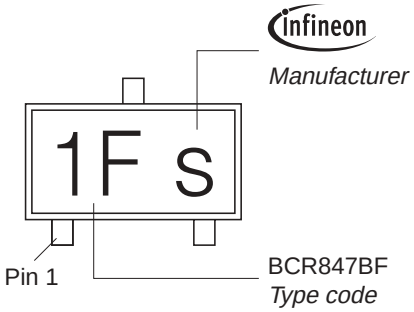


Marking Layout (Example)



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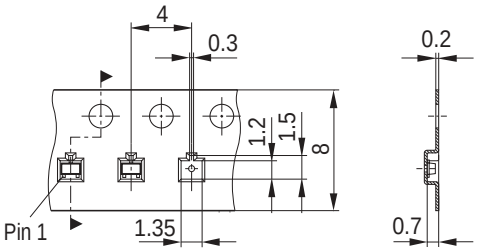

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For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office (**www.infineon.com**).

Warnings

Due to technical requirements components may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies Office.
Infineon Technologies Components may only be used in life-support devices or systems with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system, or to affect the safety or effectiveness of that device or system.
Life support devices or systems are intended to be implanted in the human body, or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.

Общество с ограниченной ответственностью «МосЧип» ИНН 7719860671 / КПП 771901001
Адрес: 105318, г.Москва, ул.Щербаковская д.3, офис 1107

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

http://moschip.ru/get-element

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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