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	
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	
BCR183S		≤ 140	
BCR183U		≤ 133	
BCR183W		≤ 105	

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

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%

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

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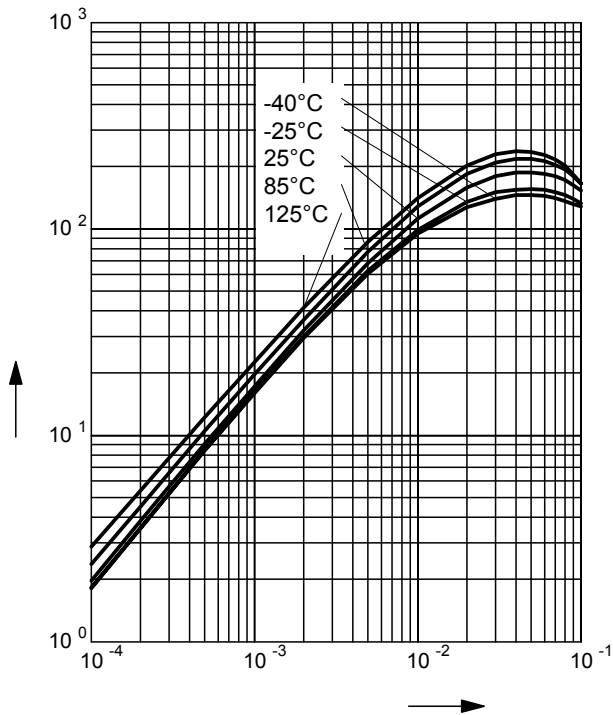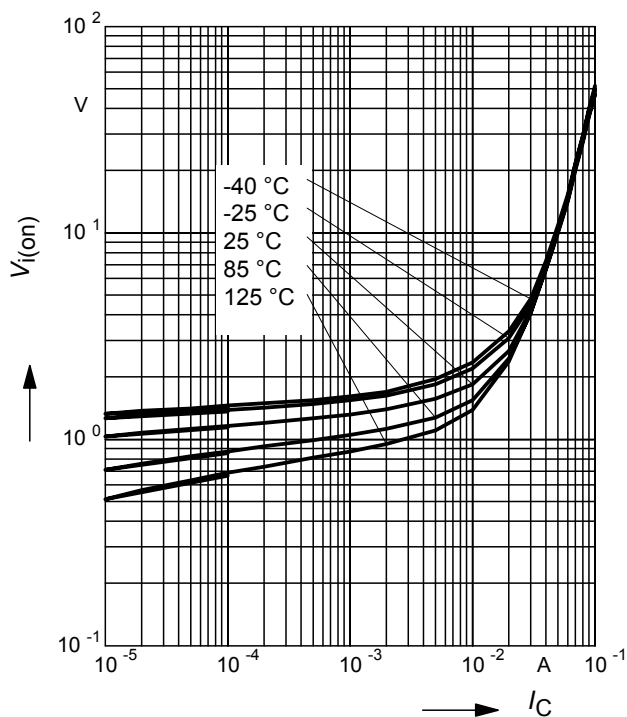

Collector-emitter saturation voltage

V_{CEsat}= $f(I_C)$, I_C/I_B = 20
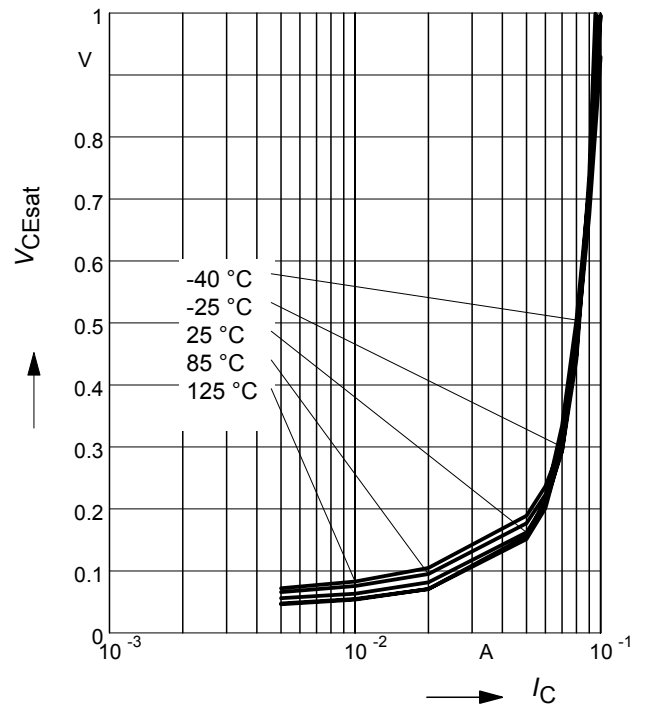
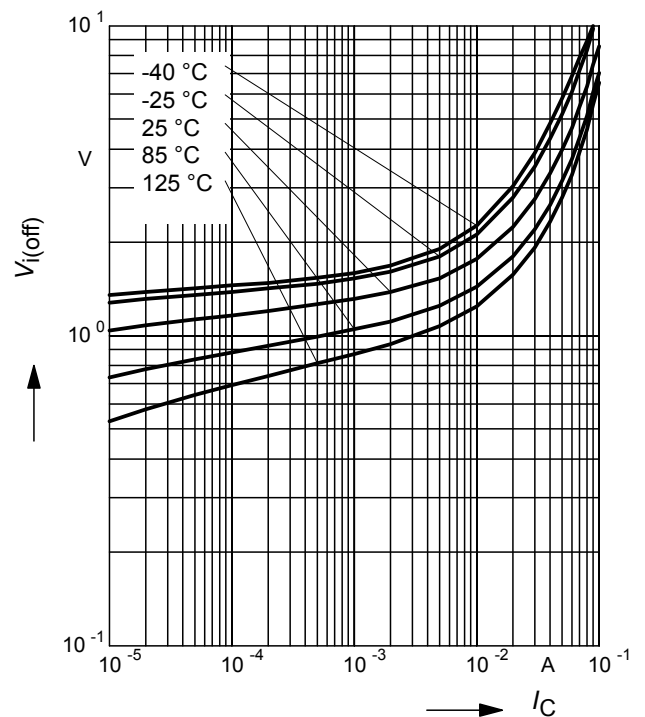**Input on Voltage** $V_{i(on)}$ = $f(I_C)$
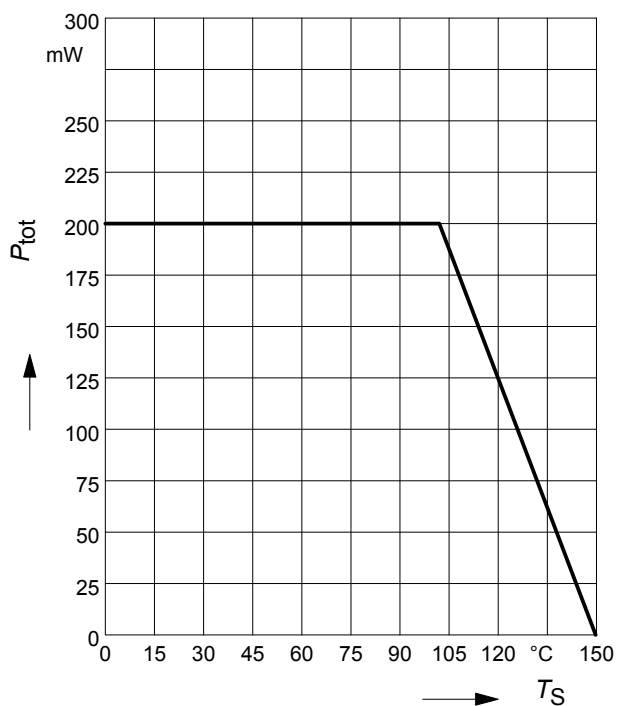
V_{CE} = 0.3V (common emitter configuration)

Input off voltage $V_{i(off)}$ = $f(I_C)$
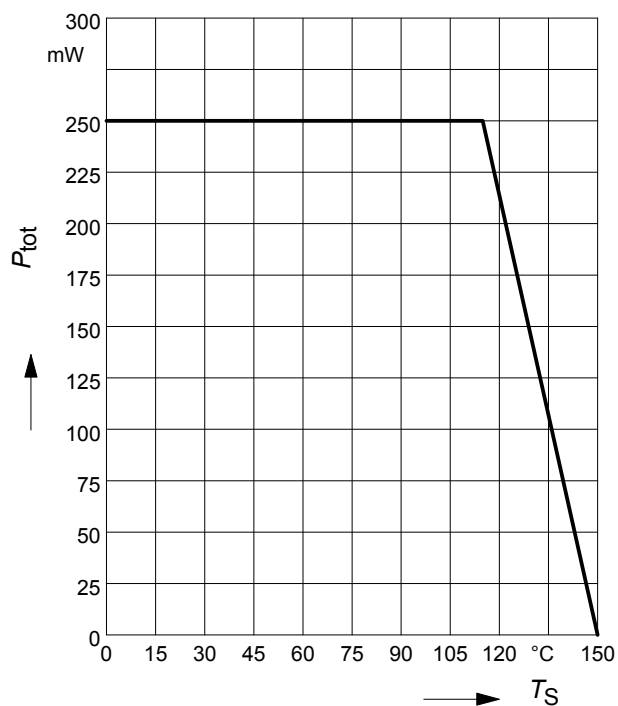
V_{CE} = 5V (common emitter configuration)

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

BCR183
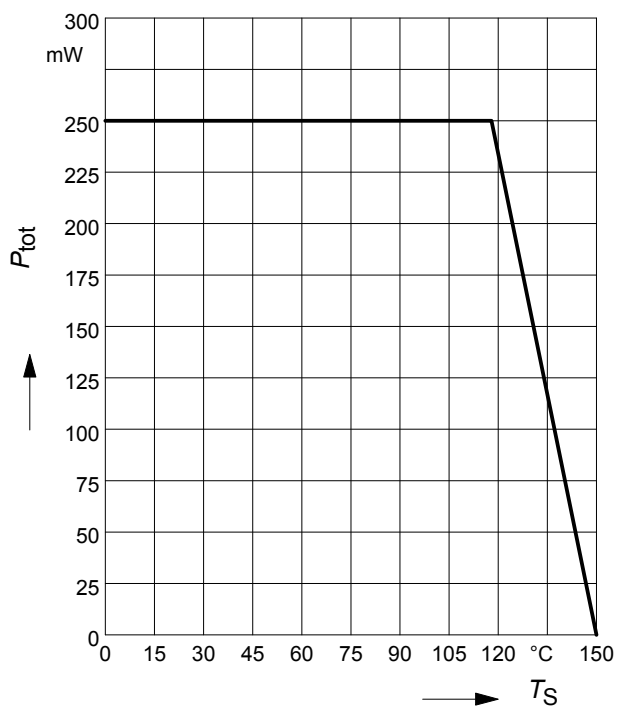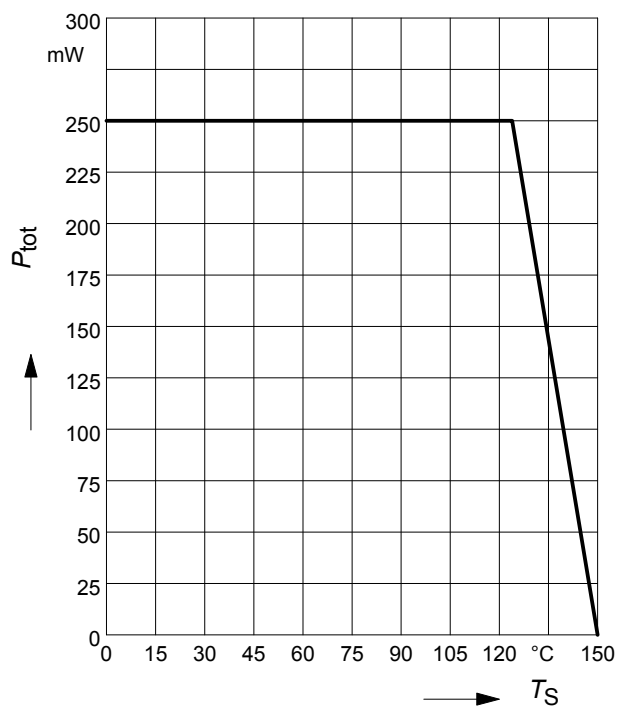

Total power dissipation $P_{tot} = f(T_S)$

BCR183S

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

BCR183U

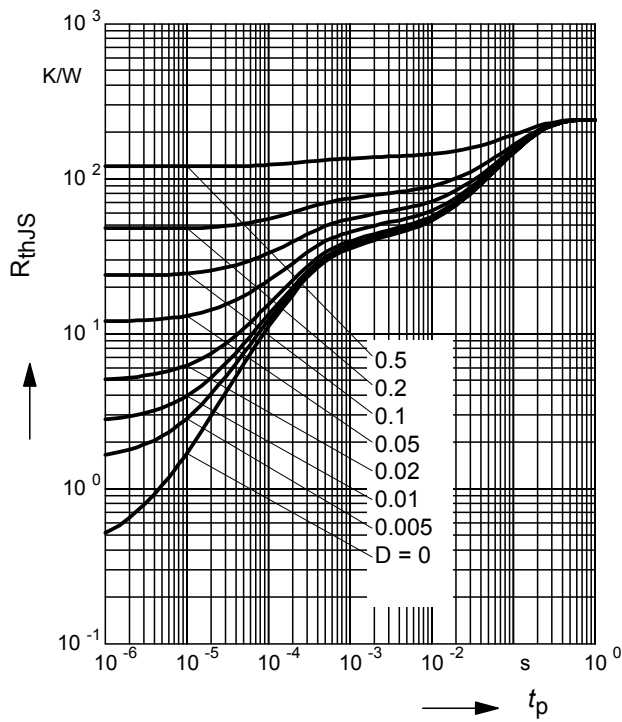**Total power dissipation** $P_{tot} = f(T_S)$

BCR183W

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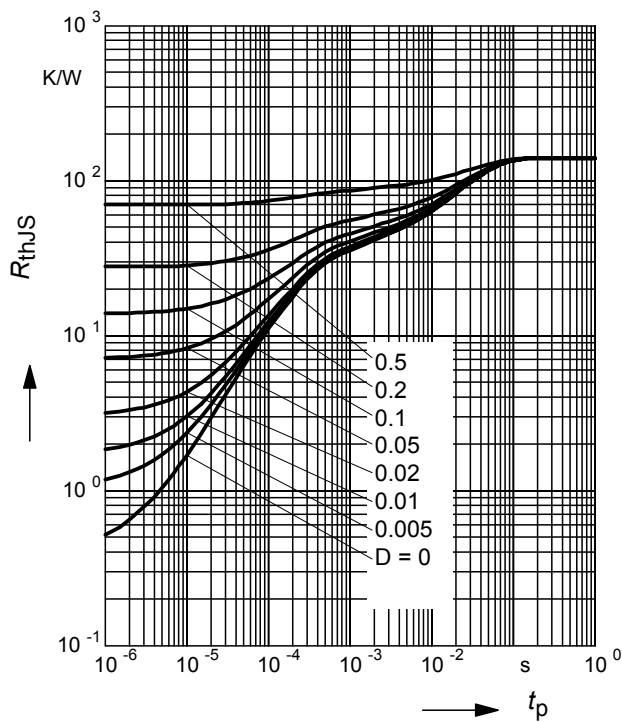**Permissible Pulse Load** $R_{\text{thJS}} = f(t_p)$

BCR183

Permissible Pulse Load

$P_{\text{totmax}}/P_{\text{totDC}} = f(t_p)$
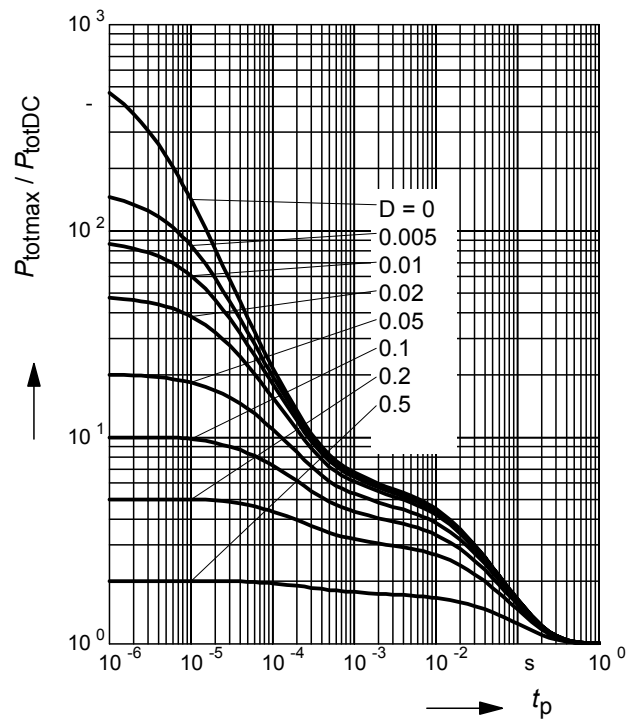
BCR183

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

BCR183S

Permissible Pulse Load

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

BCR183S

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

BCR183U

Permissible Pulse Load

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

BCR183U
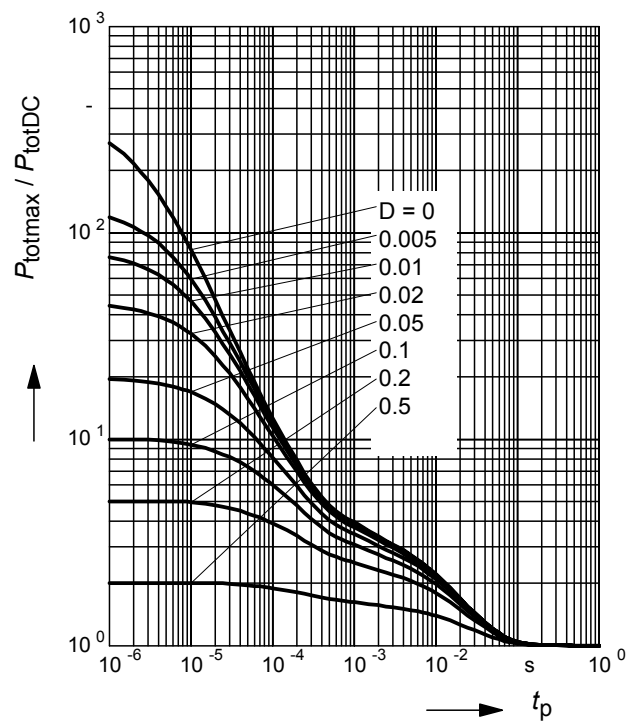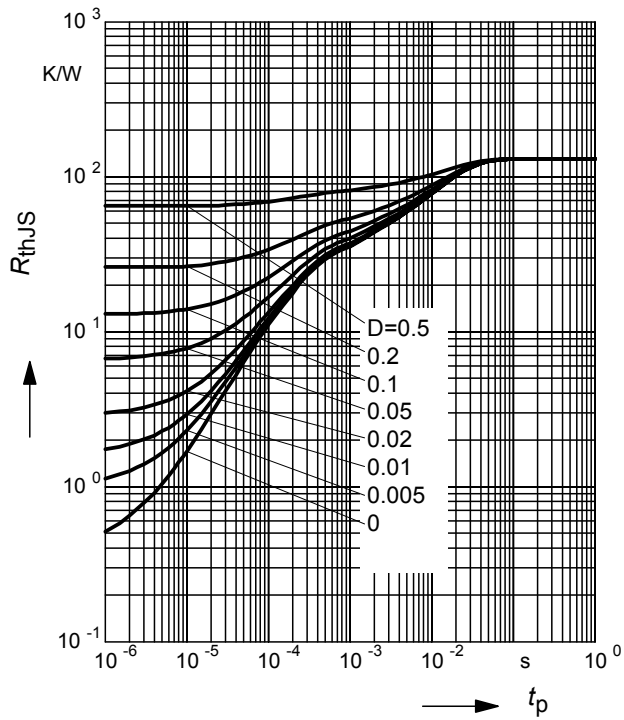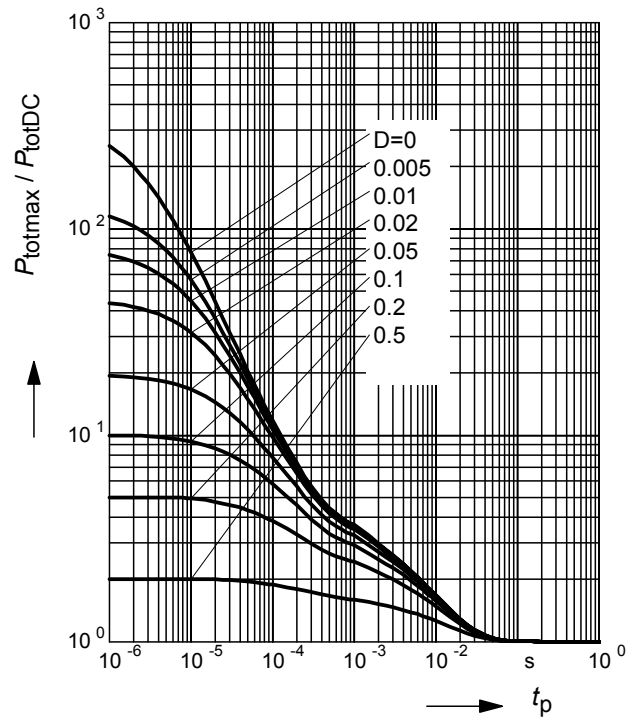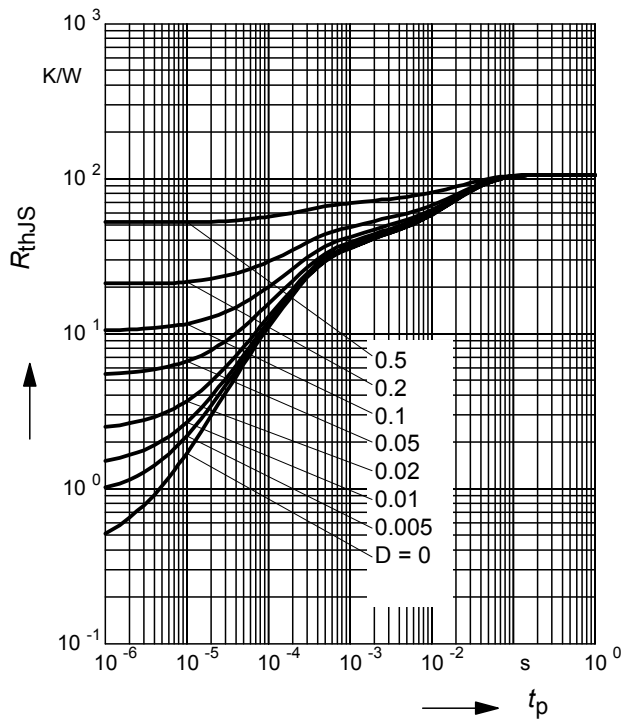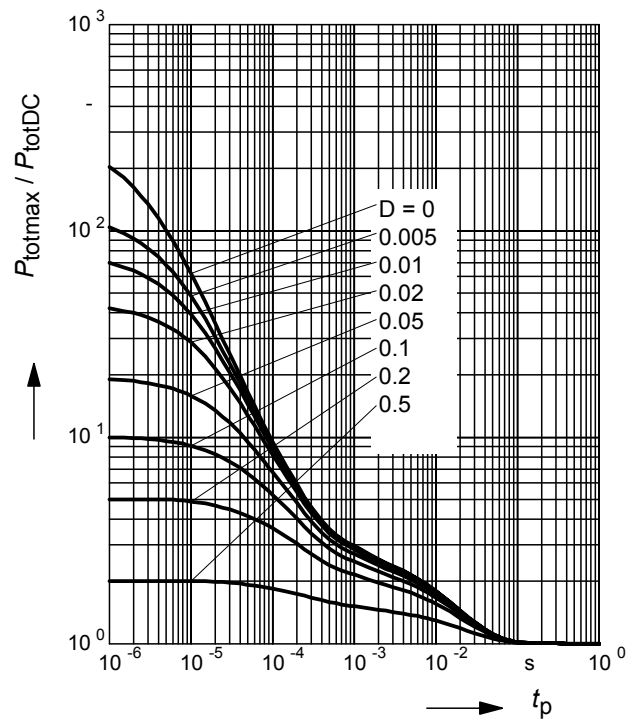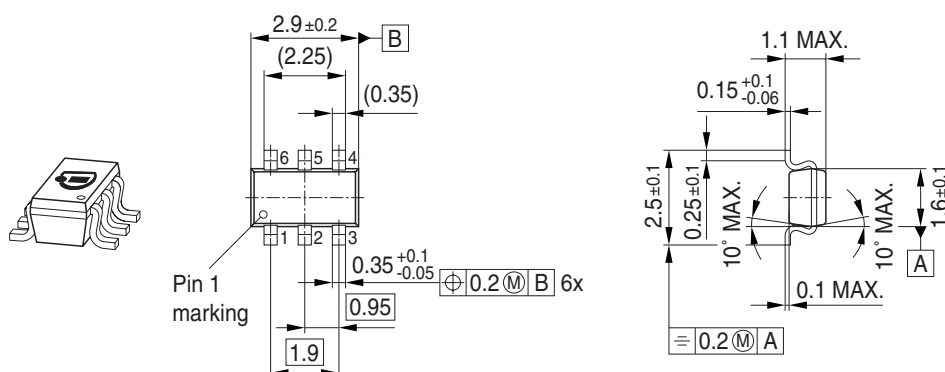

Permissible Puls Load $R_{thJS} = f(t_p)$

BCR183W

Permissible Pulse Load

$P_{totmax}/P_{totDC} = f(t_p)$
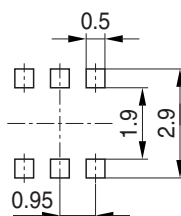
BCR183W

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Package Outline

2.9 ±0.2 [B]

(2.25)

(0.35)

6 5 4

1 2 3

Pin 1
marking

0.35 +0.1 -0.05   [⊕] [0.2 (M)] [B] 6x

0.95

1.9

1.1 MAX.

0.15 +0.1 -0.06

2.5 ±0.1

0.25 ±0.1

10° MAX.

10° MAX.
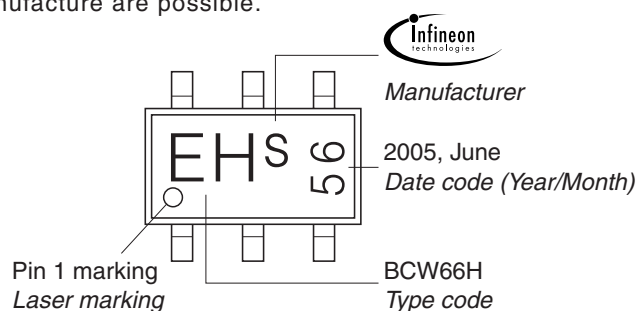
1.6 ±0.1

[A]

0.1 MAX.

[=] [0.2 (M)] [A]

Foot Print

0.5

1.9

2.9

0.95

Marking Layout (Example)

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

Infineon
technologies

Manufacturer

EH S

5 6

2005, June
Date code (Year/Month)
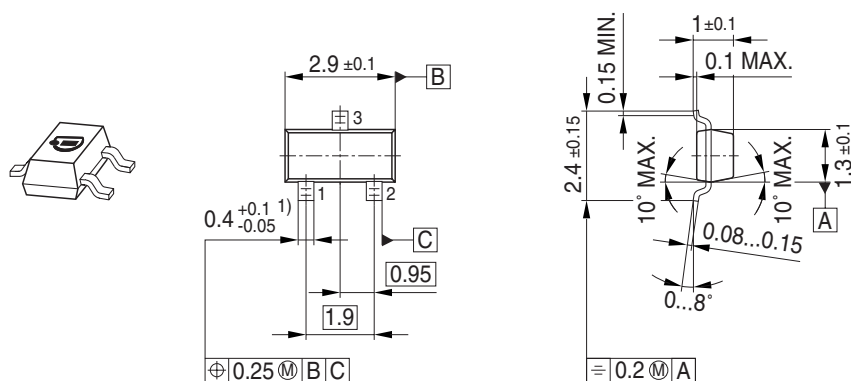
Pin 1 marking
Laser marking

BCW66H
Type code

Standard Packing

Reel ø180 mm = 3.000 Pieces/Reel
Reel ø330 mm = 10.000 Pieces/Reel
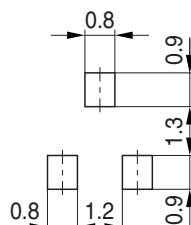
For symmetric types no defined Pin 1 orientation in reel.

4

0.2

8

2.7

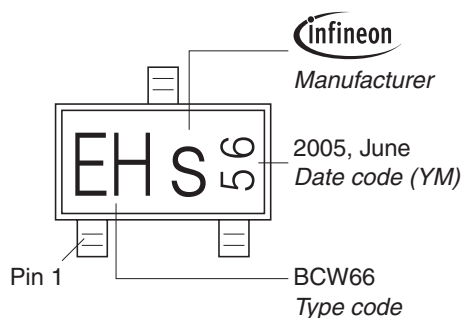Pin 1
marking

3.15

1.15

2011-08-30

Package Outline

2.9 ±0.1   B

3

1   2

0.4 +0.1 -0.05 1)   C

0.95

1.9

⊕ | 0.25 Ⓜ | B | C

1 ±0.1

0.1 MAX.

0.15 MIN.

2.4 ±0.15

10° MAX.   10° MAX.

1.3 ±0.1   A

0.08...0.15

0...8°

= | 0.2 Ⓜ | A
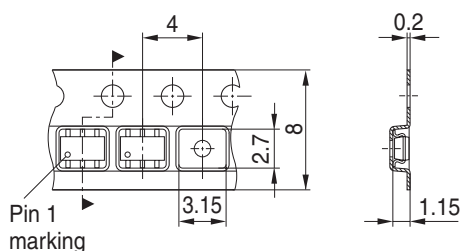
1) Lead width can be 0.6 max. in dambar area

Foot Print

0.8

0.9

1.3

0.8   1.2   0.9

Marking Layout (Example)

inineon

Manufacturer

EH S 56

2005, June
Date code (YM)

Pin 1

BCW66
Type code
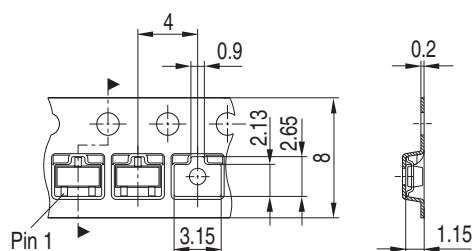
Standard Packing

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

4

0.9

0.2

2.13

2.65

8

Pin 1

3.15

1.15

2011-08-30

Package Outline

Foot Print

Marking Layout (Example)

Manufacturer

2005, June
Date code (YM)
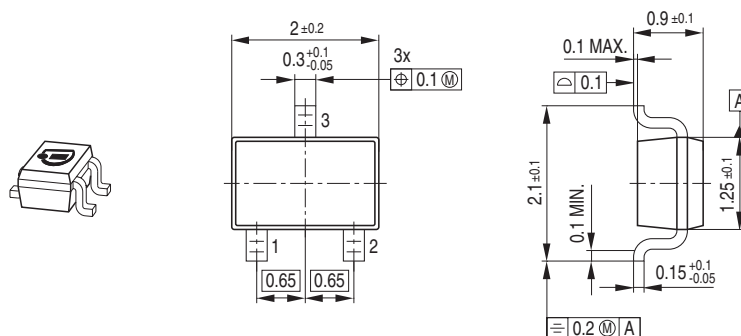
Pin 1

BCR108W
Type code

Standard Packing

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

Pin 1

Package Outline

Foot Print

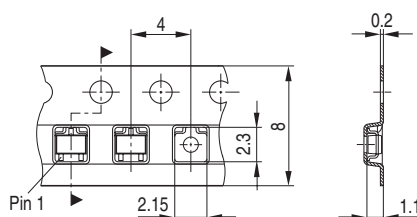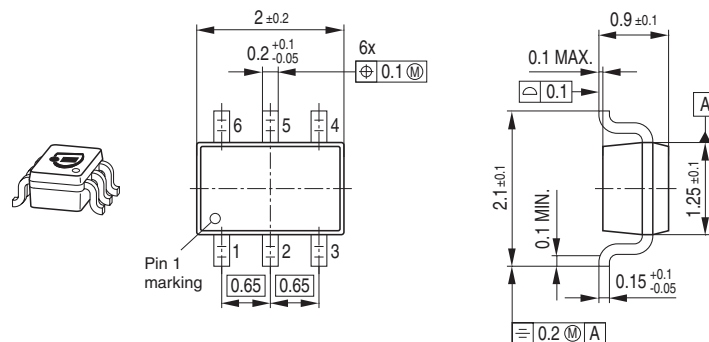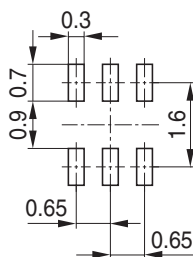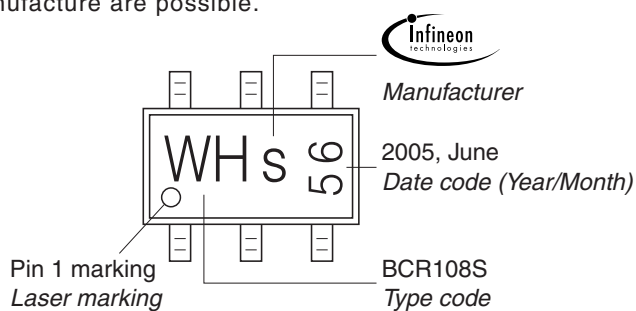## Marking Layout (Example)

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

Manufacturer

2005, June
Date code (Year/Month)

Pin 1 marking
Laser marking

BCR108S
Type code

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.

Pin 1
marking

2011-08-30
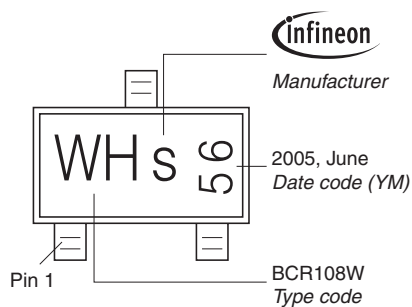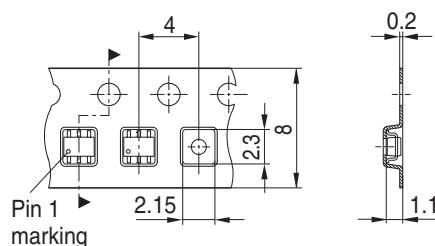
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