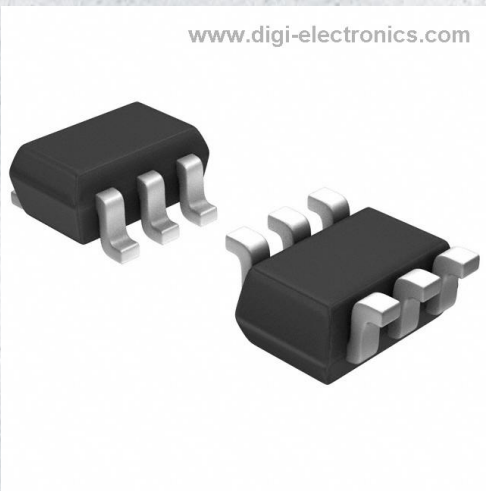
BCR129SH6327XTSA1 Datasheet



https://www.DiGi-Electronics.com

DiGi Electronics Part Number	BCR129SH6327XTSA1-DG
Manufacturer	Infineon Technologies
Manufacturer Product Number	BCR129SH6327XTSA1
Description	TRANS 2NPN PREBIAS 0.25W SOT363
Detailed Description	Pre-Biased Bipolar Transistor (BJT) 2 NPN - Pre-Biased (Dual) 50V 100mA 150MHz 250mW Surface Mount PG-SOT363-PO

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

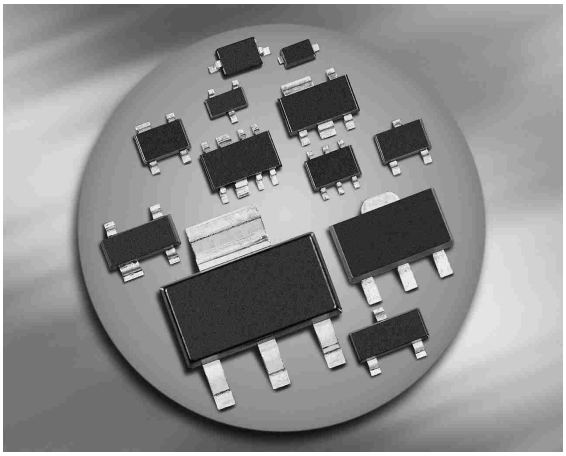
Manufacturer Product Number:	Manufacturer:
BCR129SH6327XTSA1	Infineon Technologies
Series:	Product Status:
-	Obsolete
Transistor Type:	Current - Collector (Ic) (Max):
2 NPN - Pre-Biased (Dual)	100mA
Voltage - Collector Emitter Breakdown (Max):	Resistor - Base (R1):
50V	10kOhms
Resistor - Emitter Base (R2):	DC Current Gain (hFE) (Min) @ Ic, Vce:
-	120 @ 5mA, 5V
Vce Saturation (Max) @ Ib, Ic:	Current - Collector Cutoff (Max):
300mV @ 500µA, 10mA	-
Frequency - Transition:	Power - Max:
150MHz	250mW
Mounting Type:	Package / Case:
Surface Mount	6-VSSOP, SC-88, SOT-363
Supplier Device Package:	Base Product Number:
PG-SOT363-PO	BCR129

Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
ROHS3 Compliant	1 (Unlimited)
REACH Status:	ECCN:
REACH Unaffected	EAR99
HTSUS:	
8541.21.0095	

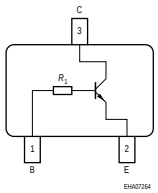
BCR129...

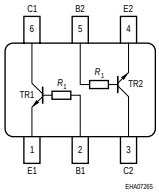
NPN Silicon Digital Transistor



- Switching circuit, inverter, interface circuit, driver circuit
- Built in bias resistor (R_1=10 kΩ)
- BCR129S: Two internally isolated transistors with good matching in one multichip package
- BCR129S: For orientation in reel see package information below
- Pb-free (RoHS compliant) package
- Qualified according AEC Q101

BCR129 **BCR129S**
BCR129W





Type	Marking	Pin Configuration						Package
BCR129	WVs	1=B	2=E	3=C	-	-	-	SOT23
BCR129S	WVs	1=E1	2=B1	3=C2	4=E2	5=B2	6=C1	SOT363
BCR129W	WVs	1=B	2=E	3=C	-	-	-	SOT323

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	$V_{i(rev)}$	5	
Collector current	I_C	100	mA
Total power dissipation-	P_{tot}		mW
BCR129, $T_S \leq 102°C$		200	
BCR129S, $T_S \leq 115°C$		250	
BCR129W, $T_S \leq 124°C$		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
BCR129		≤ 240	
BCR129S		≤ 140	
BCR129W		≤ 105	

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

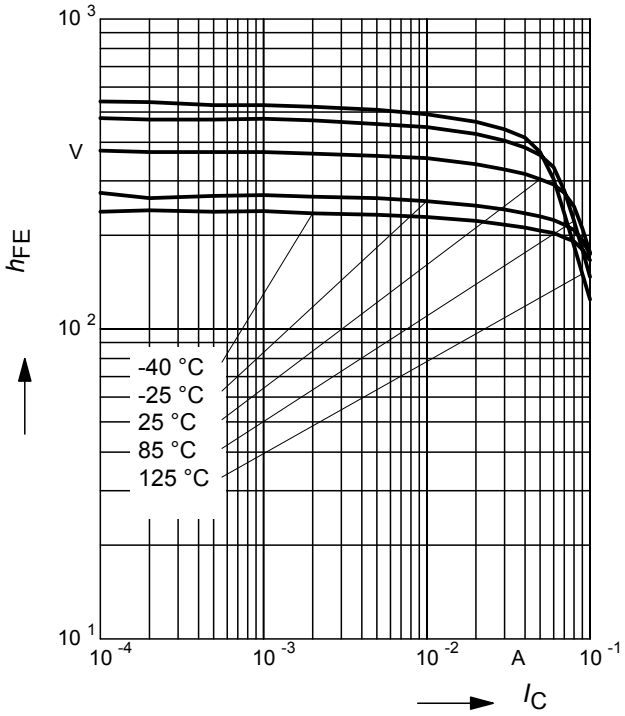
Electrical Characteristics at T_A = 25°C, unless otherwise specified

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} = 5 V, I_C = 0	I_{EBO}	-	-	100	nA
DC current gain[1)] I_C = 5 mA, V_{CE} = 5 V	h_{FE}	120	-	630	-
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	$V_{i(off)}$	0.4	-	1	
Input on voltage I_C = 2 mA, V_{CE} = 0.3 V	$V_{i(on)}$	0.5	-	1.1	
Input resistor	R_1	7	10	13	kΩ
AC Characteristics					
Transition frequency I_C = 10 mA, V_{CE} = 5 V, f = 100 MHz	f_T	-	150	-	MHz
Collector-base capacitance V_{CB} = 10 V, f = 1 MHz	C_{cb}	-	3	-	pF

[1]Pulse test: t < 300µs; D < 2%

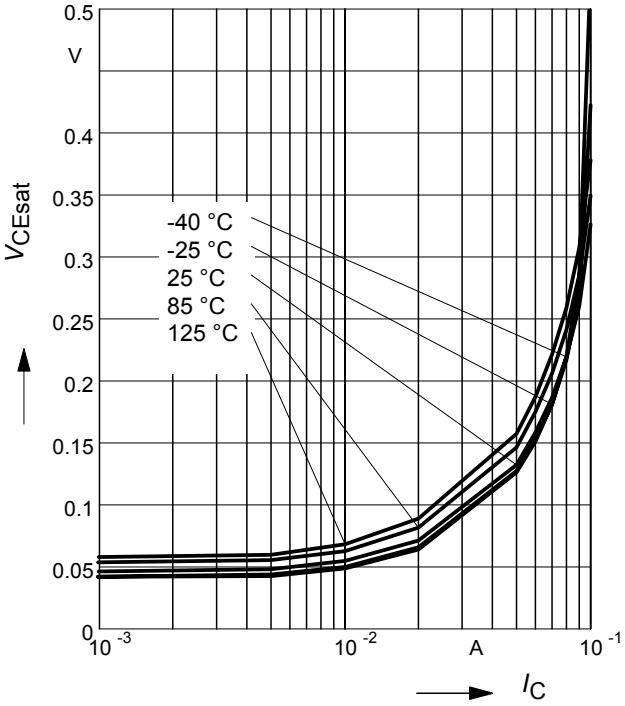
DC current gain h_{FE} = $f(I_C)$

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



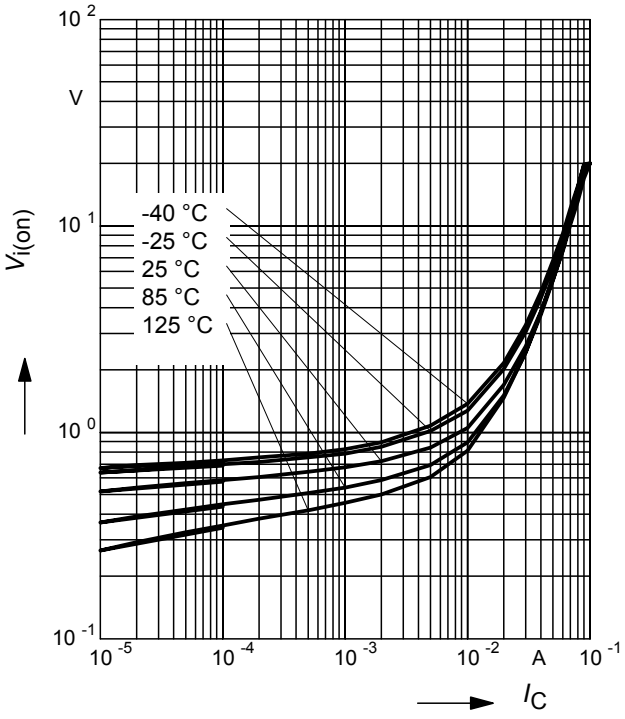
Collector-emitter saturation voltage

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



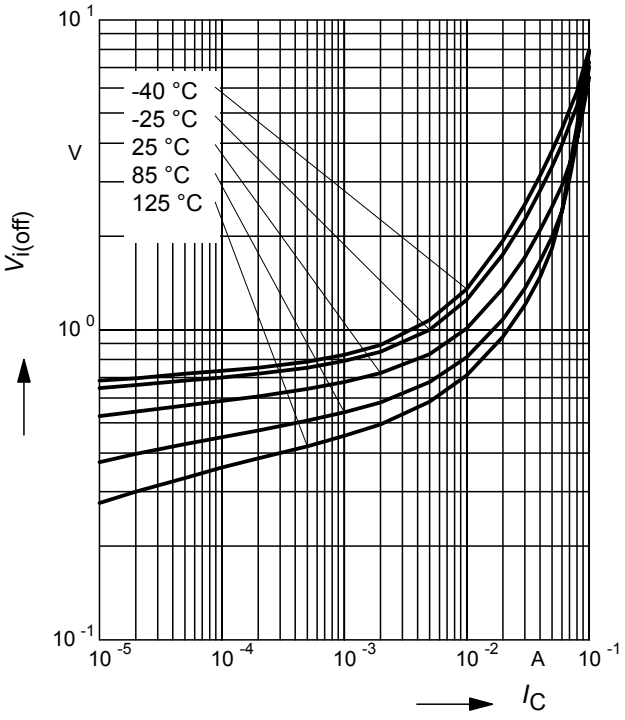
Input on Voltage $V_{i(on)}$ = $f(I_C)$

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

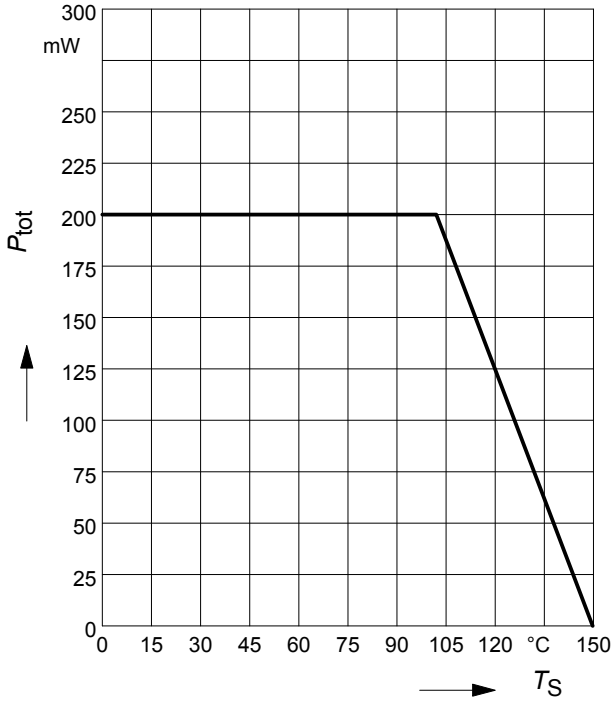


Input off voltage $V_{i(off)}$ = $f(I_C)$

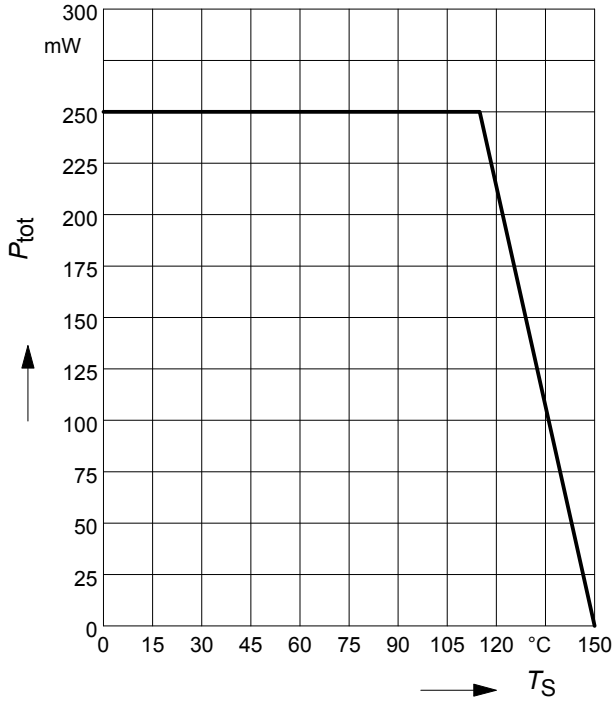
V_{CE} = 5V (common emitter configuration)



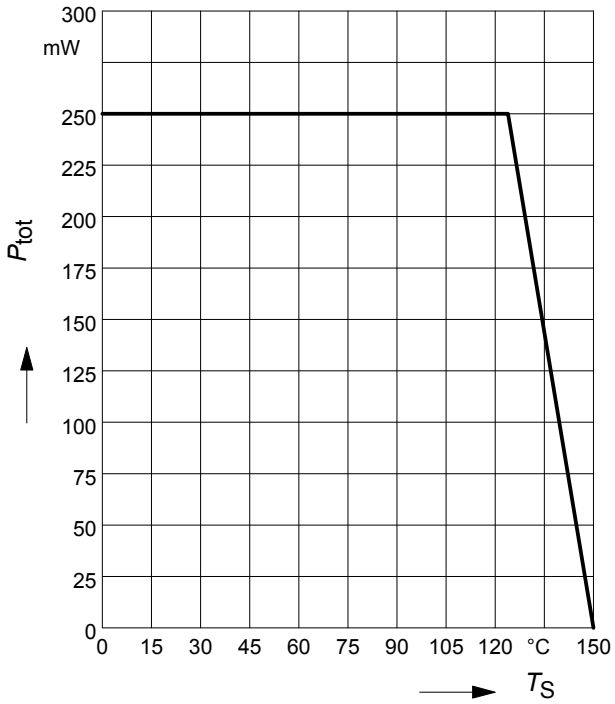
Total power dissipation $P_{tot} = f(T_S)$
BCR129



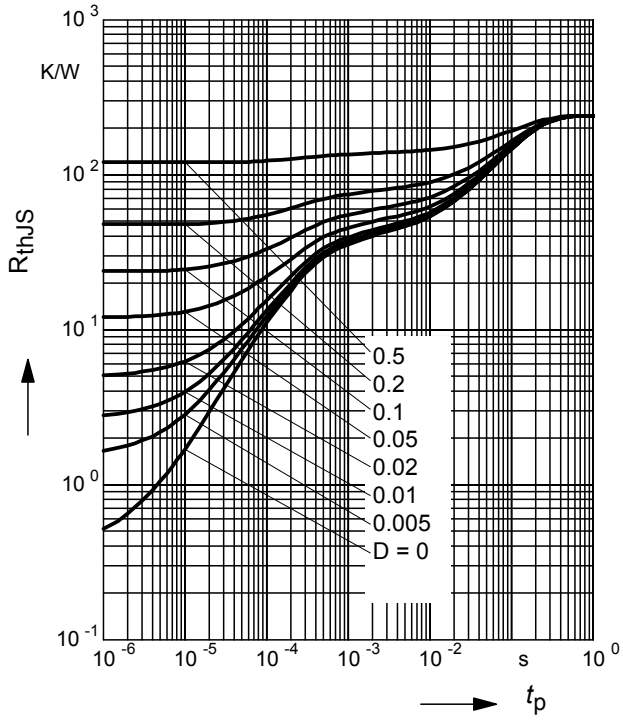
Total power dissipation $P_{tot} = f(T_S)$
BCR129S



Total power dissipation $P_{tot} = f(T_S)$
BCR129W



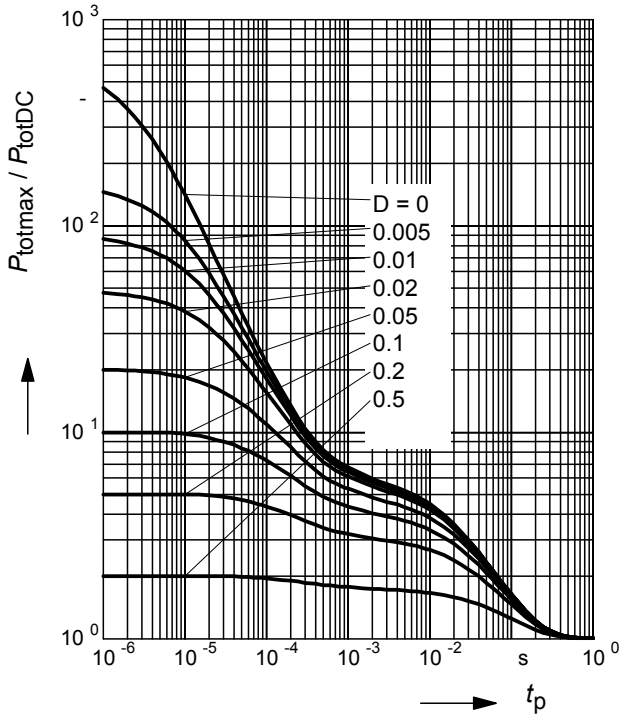
Permissible Pulse Load $R_{thJS} = f(t_p)$
BCR129



Permissible Pulse Load

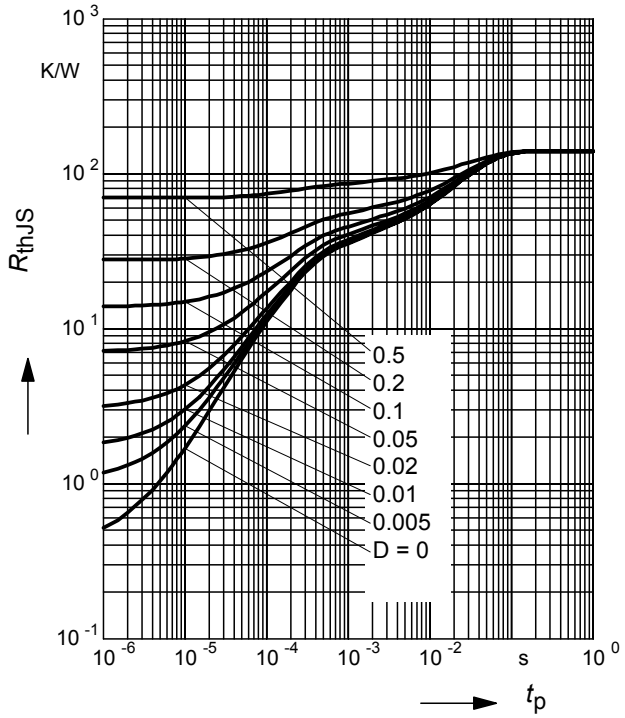
$P_{totmax}/P_{totDC} = f(t_p)$

BCR129



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

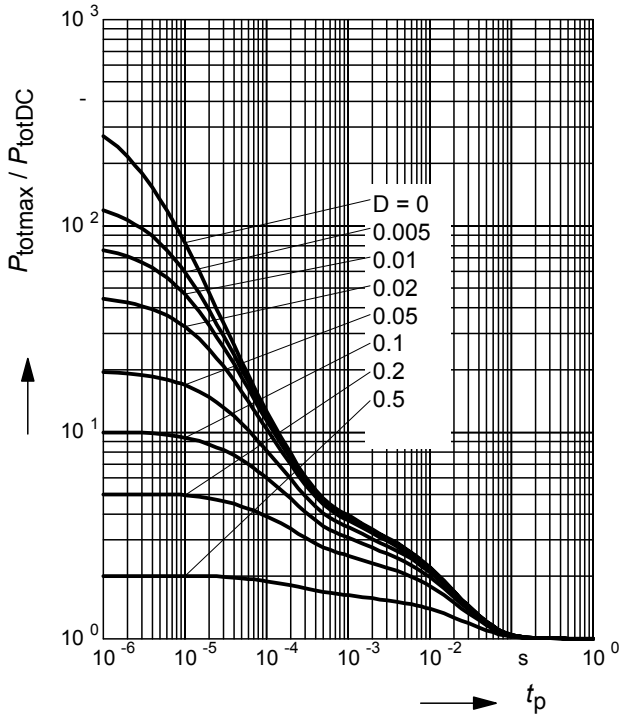
BCR129S



Permissible Pulse Load

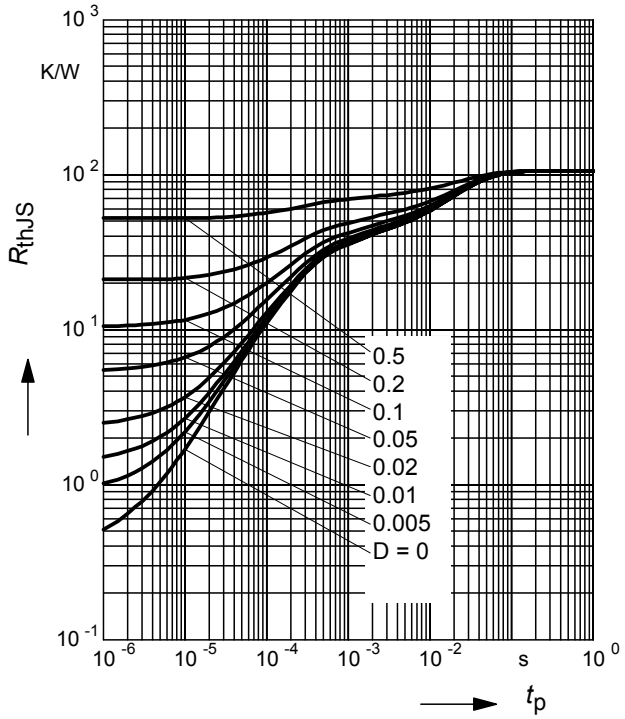
$P_{totmax}/P_{totDC} = f(t_p)$

BCR129S



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

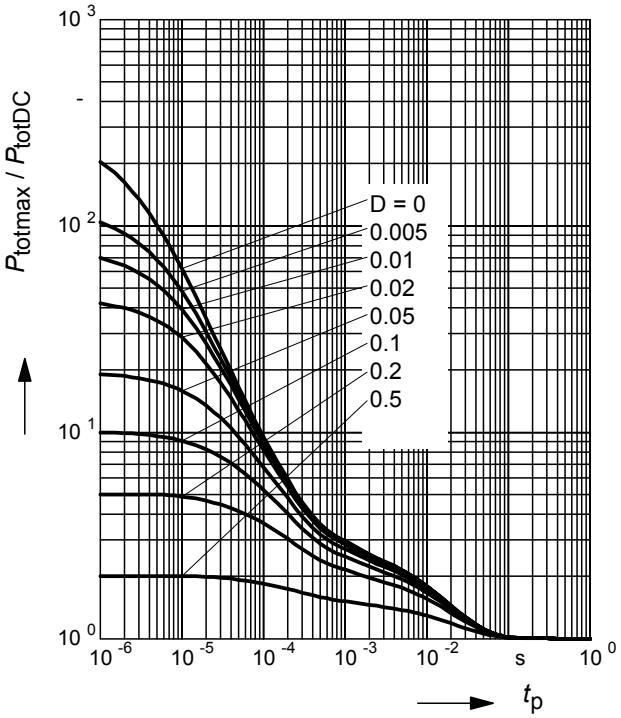
BCR129W



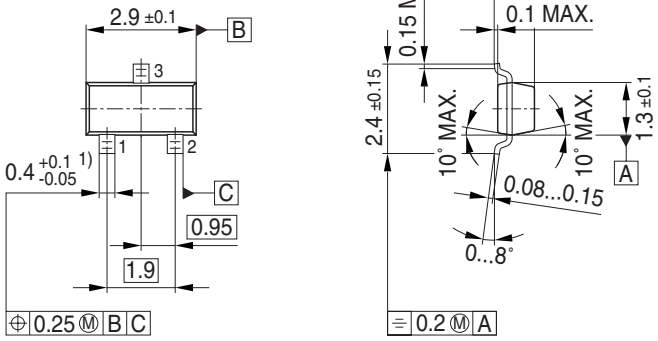
Permissible Pulse Load

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

BCR129W

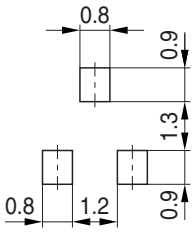


Package Outline

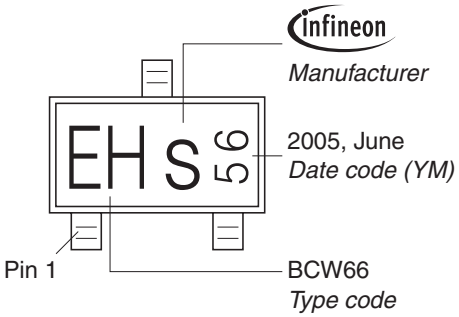


1) Lead width can be 0.6 max. in dambar area

Foot Print

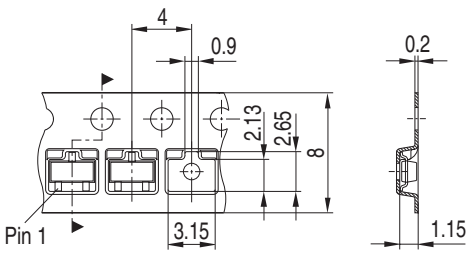


Marking Layout (Example)

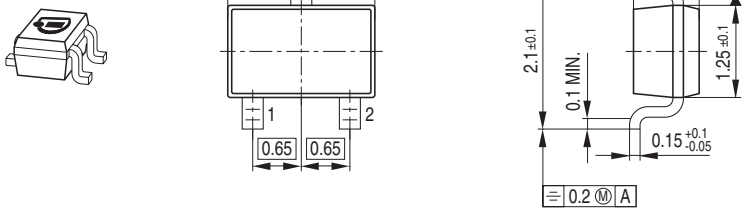


Standard Packing

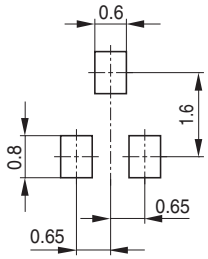
Reel ø180 mm = 3.000 Pieces/Reel
Reel ø330 mm = 10.000 Pieces/Reel



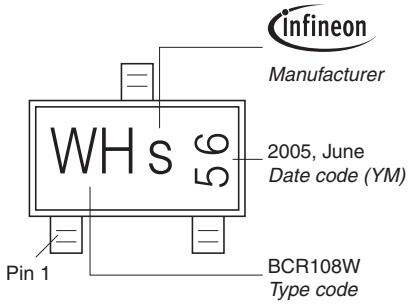
Package Outline



Foot Print

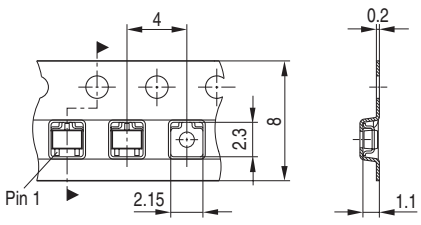


Marking Layout (Example)

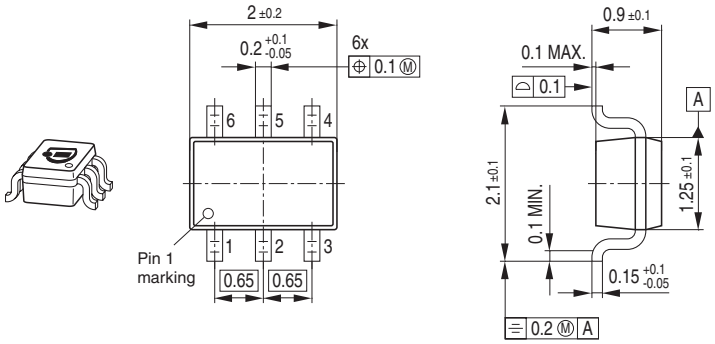


Standard Packing

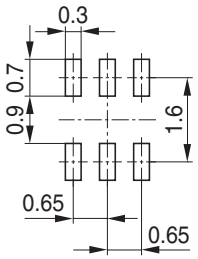
Reel ø180 mm = 3.000 Pieces/Reel
Reel ø330 mm = 10.000 Pieces/Reel



Package Outline

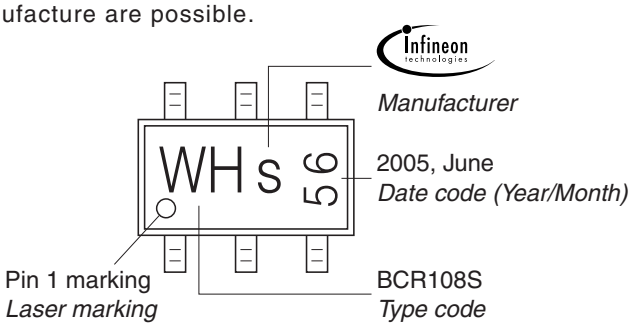


Foot Print



Marking Layout (Example)

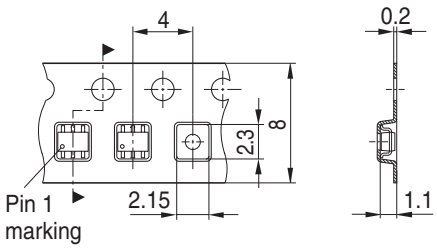
Small variations in positioning of
Date code, Type code and Manufacture are possible.



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.



Edition 2009-11-16

Published by
Infineon Technologies AG
81726 Munich, Germany

Legal Disclaimer

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.

Information

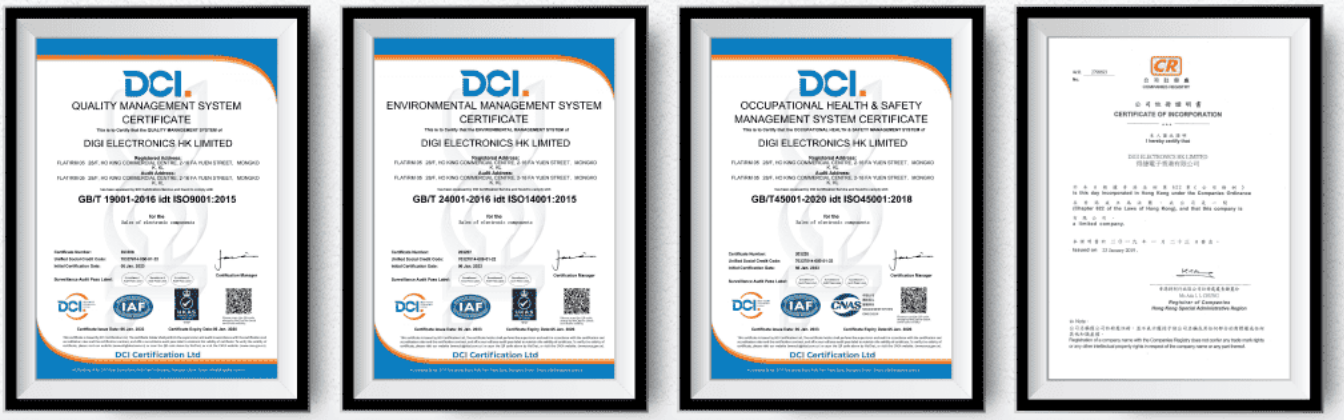
For further information on technology, delivery terms and conditions and prices, please contact the nearest Infineon Technologies Office (<www.infineon.com>).

Warnings

Due to technical requirements, components may contain dangerous substances. For information on the types in question, please contact the nearest Infineon Technologies Office.
Infineon Technologies components may be used in life-support devices or systems only 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.

OUR CERTIFICATE

DiGi provide top-quality products and perfect service for customer worldwide through standardization, technological innovation and continuous improvement. DiGi through third-party certification, we striciy control the quality of products and services. Welcome your RFQ to Email: Info@DiGi-Electronics.com



Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.