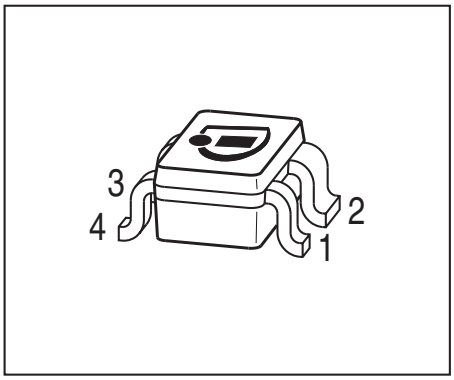
Active Bias Controller

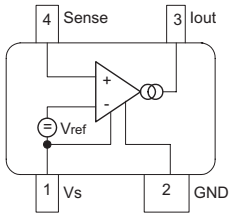


Characteristics

- Supplies stable bias current from 1.8V operating voltage on
- Low voltage drop:
  110mV for 10mA collector currrent

Application notes

- Stabilizing bias current of NPN transistors and FET's from 100µA to 20mA
- Ideal supplement for Sieget and other transistors



- Pb-free (RoHS compliant) package [1)]
- Qualified according AEC Q101

AEC Qualified RoHS

Type	Marking	Pin Configuration				Package
BCR410W	W8s	1= Vs	2=GND	3=Iout	4=Sense	SOT343

Maximum Ratings

Parameter	Symbol	Value	Unit
Supply voltage	V_S	18	V
Output current	I_{out}	0.5	mA
Total power dissipation, T_S = 110 °C	P_{tot}	100	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-65 ... 150	

Thermal Resistance

Junction - soldering point[2)]	R_{thJS}	≤ 470	K/W

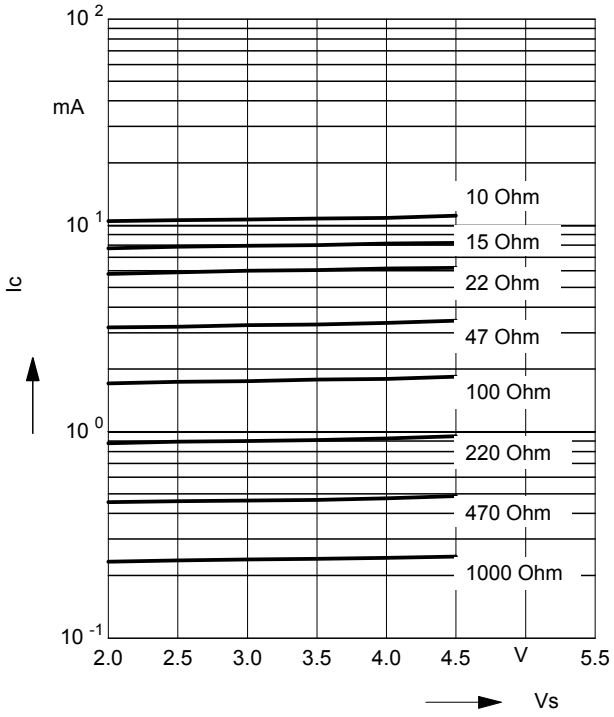
[1]Pb-containing package may be available upon special request

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

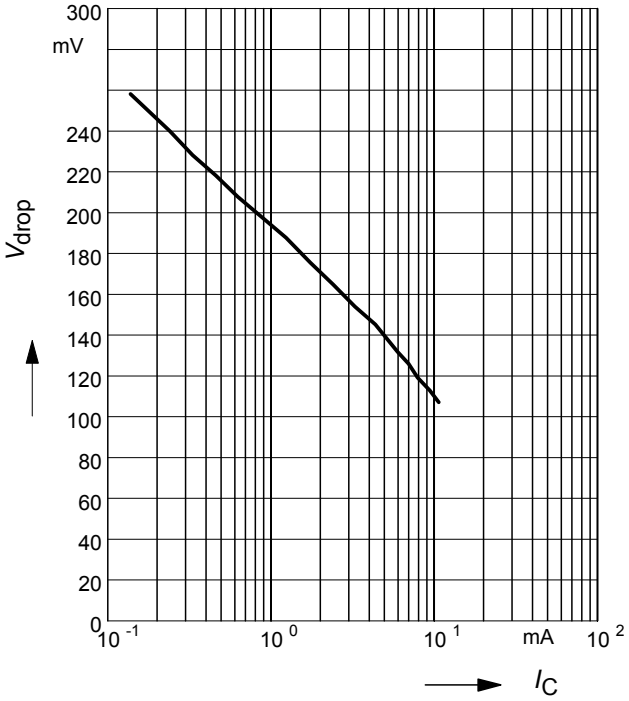
Electrical Characteristics at T_A = 25°C, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Additional current consumption V_S = 3 V	I_0	-	200	400	µA
DC Characteristics with stabilized NPN-Transistors					
Lowest sufficient battery voltage	V_{Smin}	-	1.8	-	V
Voltage drop I_C = 10 mA	V_{drop}	-	110	-	mV
Change of I_C versus h_{FE} h_{FE} = 50	$\Delta I_C/I_C$	-	tbd	-	Δh_{FE} / h_{FE}
Change of I_C versus V_S V_S = 3 V	$\Delta I_C/I_C$	-	2	-	%/V
Change of I_C versus T_A	$\Delta I_C/I_C$	-	0.15	-	%/K

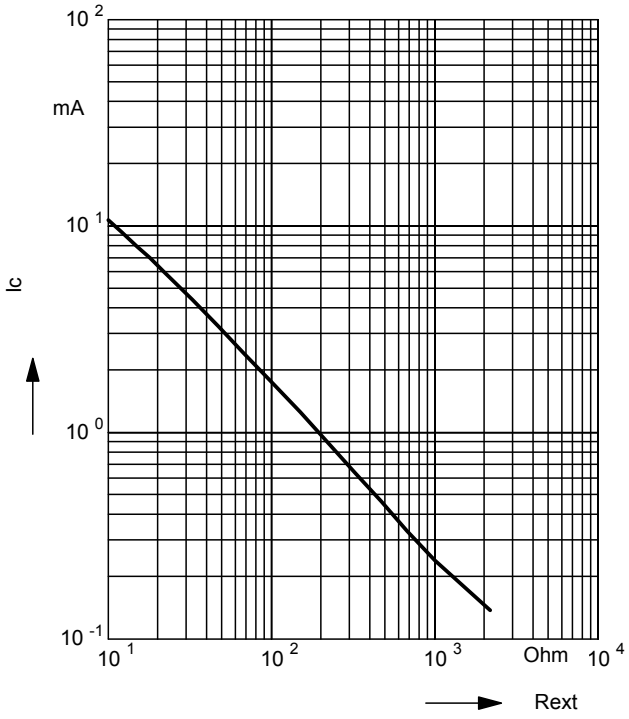
Collector Current $I_C = f(V_S)$
of stabilized NPN Transistor
Parameter $R_{ext.}$ (Ω)



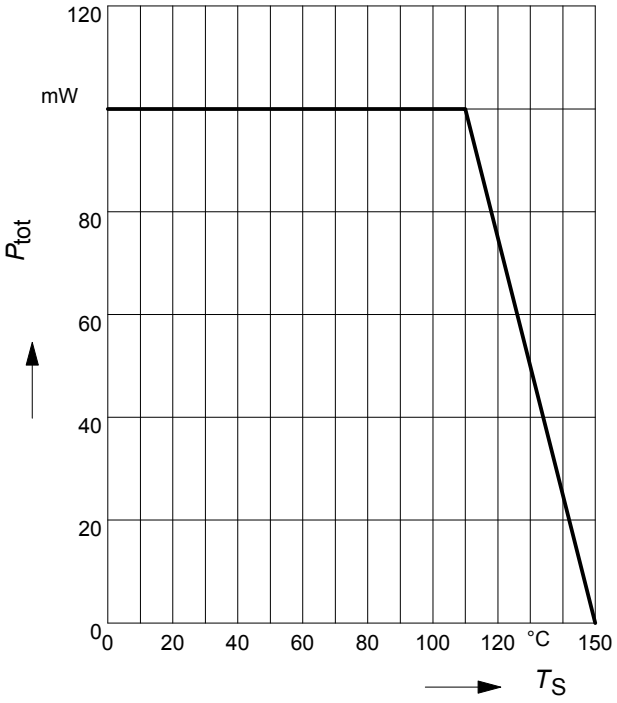
Voltage drop $V_{drop} = f(I_C)$



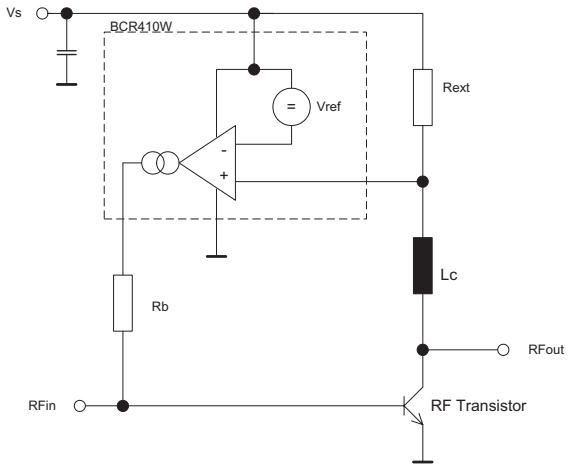
Collector current $I_C = f(R_{ext.})$
of stabilized NPN Transistor



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

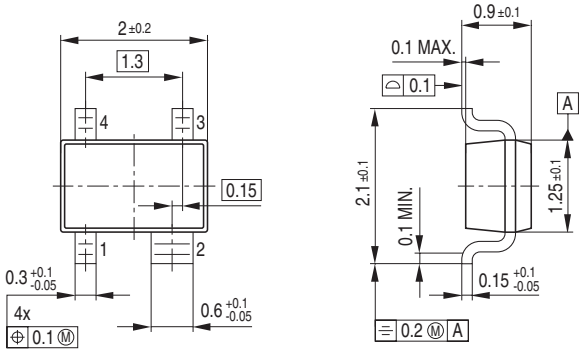


Application Circuit:

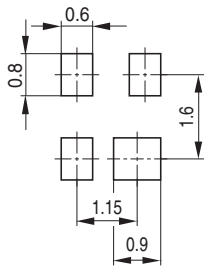


Package Outline

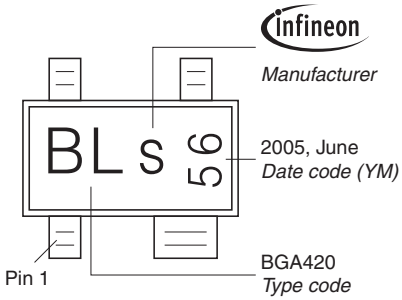




Foot Print

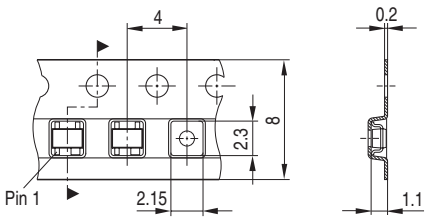


Marking Layout (Example)



Standard Packing

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



Published by
Infineon Technologies AG
81726 München, Germany
© Infineon Technologies AG 2007.
All Rights Reserved.

Attention please!

The information given in this data sheet shall in no event be regarded as a guarantee of conditions or characteristics (“Beschaffenheitsgarantie”). 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 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.