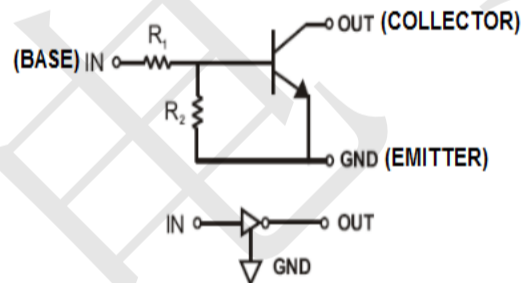
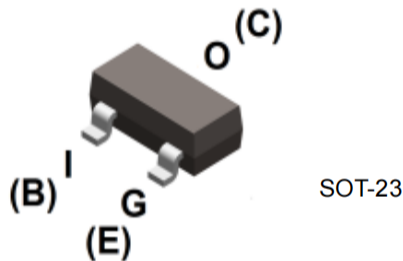


Features

- Epitaxial planar die construction
- Built-in biasing resistors (R_1 : 10k Ω , R_2 : 47k Ω)
- Also available in lead free version
- RoHS compliant with Halogen-free

Mechanical Data

- Case: SOT-23
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



Ordering Information

Part Number	Package	Shipping Quantity
BCR135	SOT-23	3000 pcs / Tape & Reel

Maximum Ratings (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
		SOT-23	
Supply Voltage	V_{CC}	50	V
Input Voltage	V_I	-6 to +40	V
Output Current	I_O	70	mA
Collector Current	$I_{C(\text{Max})}$	100	mA
Power Dissipation	P_D	200	mW
Junction Temperature Range	T_J	-55 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 ~ +150	$^\circ\text{C}$

Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input Voltage	$V_{I(OFF)}$	$V_{CC} = 5V, I_o = 100\mu A$	0.3	-	-	V
Input Voltage	$V_{I(ON)}$	$V_o = 0.3V, I_o = 1mA$	-	-	1.4	V
Output Voltage	$V_{O(on)}$	$I_o = 5mA, I_i = 0.25mA$	-	-	0.3	V
Input Current	I_i	$V_i = 5V$	-	-	0.88	mA
Output Current	$I_{O(off)}$	$V_{CC} = 50V, V_i = 0V$	-	-	0.5	μA
DC Current Gain	G_i	$V_o = 5V, I_o = 5mA$	68	-	-	-
Input Resistor	R_i		7	10	13	k Ω
Resistance ratio	R_2/R_1		3.7	4.7	5.7	-
Gain-Bandwidth Product	f_T	$V_{CE} = 10V, I_E = 5mA$ $f = 100MHz$	-	250	-	MHz

Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

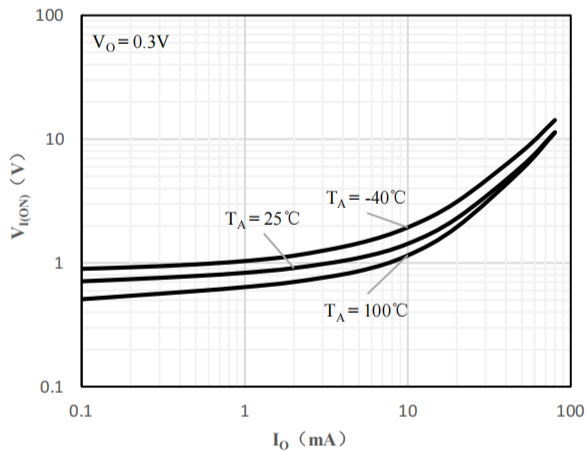


Fig 1 Input Voltage vs Output Current

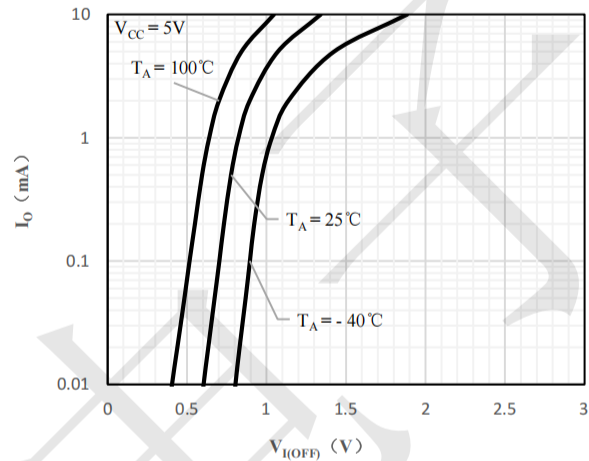


Fig 2 Output Current vs Input Voltage

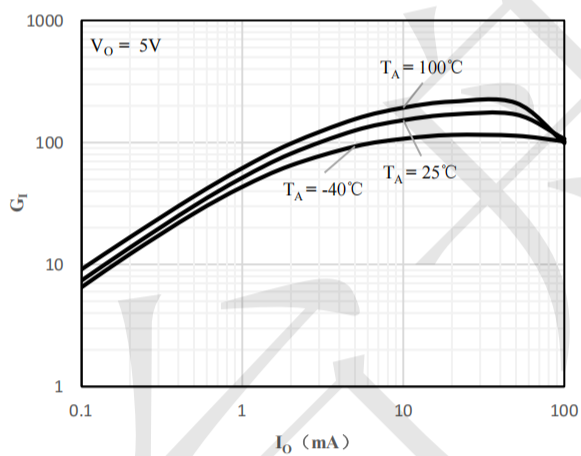


Fig 3 DC Current Gain vs Output Current

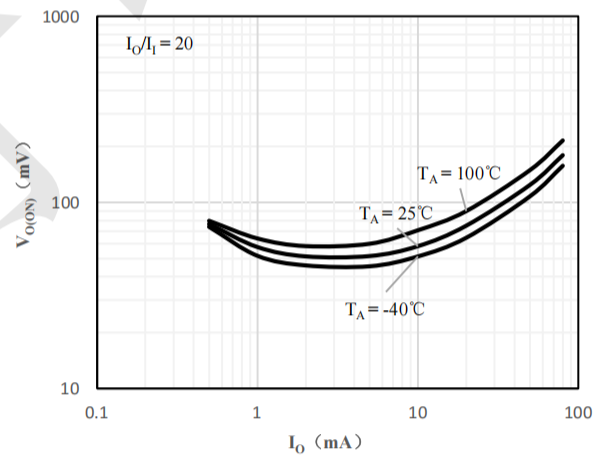
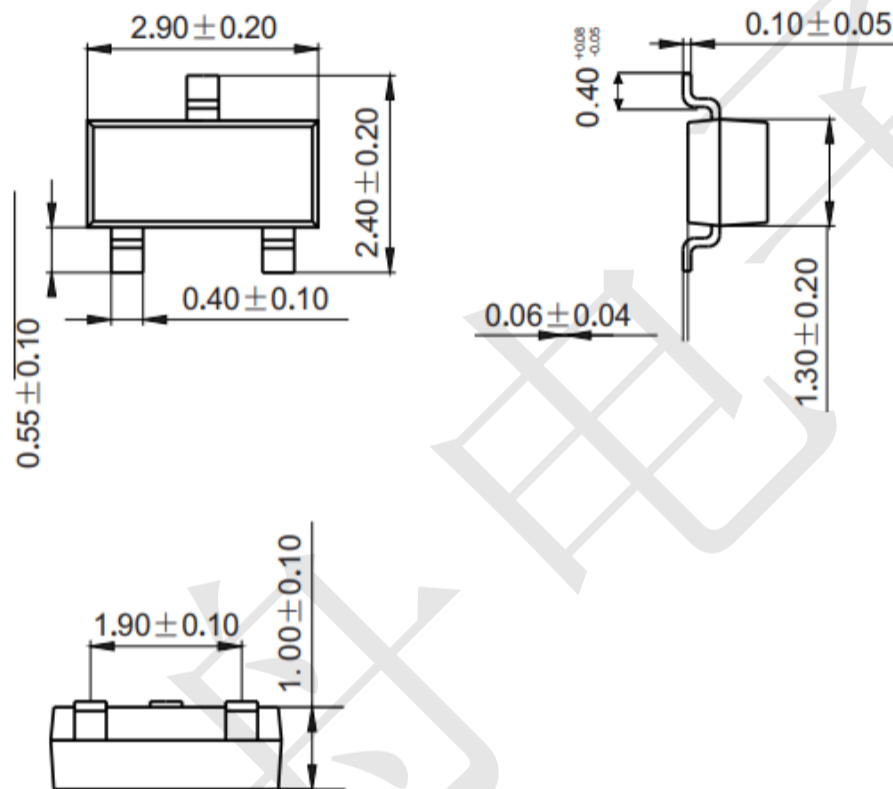


Fig 4 Output Voltage vs Output Current

Package information (Unit: mm)

SOT-23



Mounting Pad Layout (Unit: mm)

