

SOT-23 Formed SMD Package

**BF820
BF822**

SILICON EPITAXIAL TRANSISTORS

N-P-N transistors

Marking

BF820 = 1V

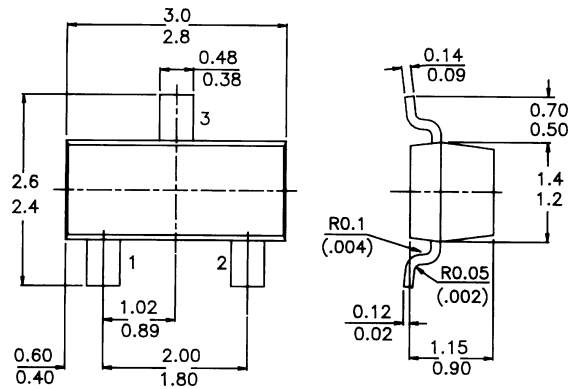
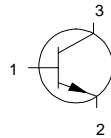
BF822 = 1X

PACKAGE OUTLINE DETAILS

ALL DIMENSIONS IN *mm*

Pin configuration

- 1 = BASE
- 2 = EMITTER
- 3 = COLLECTOR



ABSOLUTE MAXIMUM RATINGS

		BF820	BF822
Collector-base voltage (open emitter)	V_{CB0} max.	300	250 V
Collector-emitter voltage (open base)	V_{CE0} max.	-	250 V
Collector-emitter voltage ($R_{BE} = 2,7$ kW)	V_{CER} max.	300	- V
Collector current (peak value)	I_{CM} max.	100	mA
Total power dissipation up to $T_{amb} = 25$ °C	P_{tot} max.	250	mW
Junction temperature	T_j max.	150	°C
D.C. current gain	h_{FE}	>	50
Feedback capacitance at $f = 1$ MHz	C_{re}	<	1,6 pF
Transition frequency at $f = 35$ MHz	f_T	>	60 MHz

BF820
BF822

RATINGS (at $T_A = 25^\circ\text{C}$ unless otherwise specified)

Limiting values

		BF820	BF822
Collector-base voltage (open emitter)	V_{CB0} max.	300	250 V
Collector-emitter voltage (open base)	V_{CE0} max.	—	250 V
Collector-emitter voltage ($R_{BE} = 2,7 \text{ kW}$)	V_{CER} max.	300	— V
Emitter-base voltage (open collector)	V_{EB0} max.	5	V
Collector current (d.c.)	I_C max.	50	mA
Collector current (peak value)	I_{CM} max.	100	mA
Total power dissipation up to $T_{amb} = 25^\circ\text{C}$	P_{tot} max.	250	mW
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$
Junction temperature	T_j max.	150	$^\circ\text{C}$

THERMAL RESISTANCE

From junction to ambient

$R_{th \ j-a}$	500	KW
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CHARACTERISTICS

$T_j = 25^\circ\text{C}$ unless otherwise specified

Collector cut-off current

$I_E = 0; V_{CB} = 200 \text{ V}$

	BF820	BF822
$I_{CB0} <$	10	10 nA

Collector-emitter voltage

$R_{BE} = 2,7 \text{ kW}; V_{CE} = 250 \text{ V}$

$I_{CER} <$	50	50 nA
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$R_{BE} = 2,7 \text{ kW}; V_{CE} = 200 \text{ V}; T_j = 150^\circ\text{C}$

$I_{CER} <$	10	10 mA
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Saturation voltage

$I_C = 30 \text{ mA}; I_B = 5 \text{ mA}$

$V_{CEsat} <$	0,6	V
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D.C. current gain

$I_C = 25 \text{ mA}; V_{CE} = 20 \text{ V}$

$h_{FE} >$	50	
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Transition frequency at $f = 35 \text{ MHz}$

$I_C = 10 \text{ mA}; V_{CE} = 10 \text{ V}$

$f_T >$	60	MHz
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Feedback capacitance at $f = 1 \text{ MHz}$

$I_C = 0; V_{CE} = 30 \text{ V}$

$C_{re} <$	1,6	pF
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Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished on the CDIL Web Site/ CD is believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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