

SOT-23 Formed SMD Package

BF821

BF823

SILICON EPITAXIAL TRANSISTORS

P-N-P transistors

Marking

BF821 = 1W

BF823 = 1Y

PACKAGE OUTLINE DETAILS

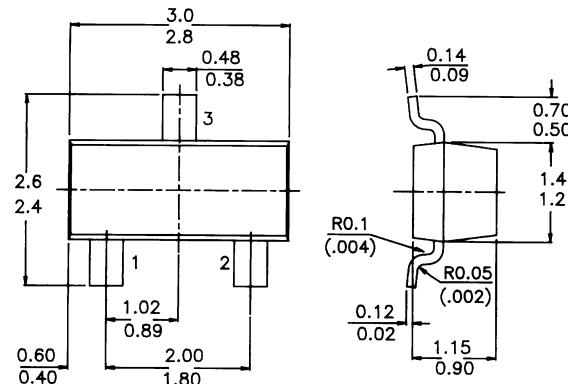
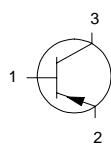
ALL DIMENSIONS IN mm

Pin configuration

1 = BASE

2 = Emitter

3 = COLLECTOR



ABSOLUTE MAXIMUM RATINGS

		BF821	BF823
Collector-base voltage (open emitter)	$-V_{CBO}$ max.	300	250 V
Collector-emitter voltage (open base)	$-V_{CEO}$ max.	—	250 V
Collector-emitter voltage ($R_{BE} = 2,7 \text{ k}\Omega$)	$-V_{CER}$ max.	300	— V
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
Junction temperature	T_j max.	150	$^\circ\text{C}$
D.C. current gain $-I_C = 25 \text{ mA}; -V_{CE} = 20 \text{ V}$	h_{FE}	>	50
Feedback capacitance at $f = 1 \text{ MHz}$ $I_C = 0; -V_{CE} = 30 \text{ V}$	C_{re}	<	1,6 pF
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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RATINGS (at $T_A = 25^\circ\text{C}$ unless otherwise specified)

Limiting values

		BF821	BF823
Collector-base voltage (open emitter)	$-V_{CB0}$	max. 300	250 V
Collector-emitter voltage (open base)	$-V_{CEO}$	max. —	250 V
Collector-emitter voltage ($R_{BE} = 2,7 \text{ kW}$)	$-V_{CER}$	max. 300	— V
Emitter-base voltage (open collector)	$-V_{EBO}$	max. 5	V
Collector current (d.c.)	$-I_C$	max. 50	mA
Collector current (peak value)	$-ICM$	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	°C
Junction temperature	T_j	max. 150	°C

THERMAL RESISTANCE

From junction to ambient

$R_{th\ j-a} = 500 \text{ K/W}$

CHARACTERISTICS

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

Collector cut-off current

$I_E = 0; -V_{CB} = 200V$

Collector-emitter voltage

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

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

Saturation voltage

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

D.C. current gain

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

Transition frequency at $f = 35 \text{ MHz}$

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

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

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

		BF821	BF823
Collector cut-off current	$-I_{CB0}$	< 10	10 nA
Collector-emitter voltage	$-I_{CER}$	< 50	50 nA
$R_{BE} = 2,7 \text{ kW}; V_{CE} = 200 \text{ V}$	$-I_{CER}$	< 10	10 mA
Saturation voltage	$-V_{CEsat}$	< 0,8	V
D.C. current gain	h_{FE}	> 50	
Transition frequency at $f = 35 \text{ MHz}$	f_T	> 60	MHz
Feedback capacitance at $f = 1 \text{ MHz}$	C_{re}	< 1,6	pF

Disclaimer

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