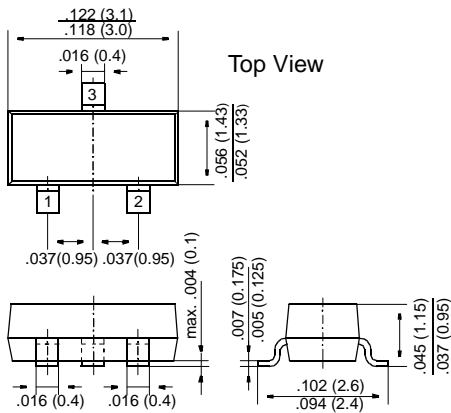


BF821, BF823

Small Signal Transistors (PNP)

SOT-23



Dimensions in inches and (millimeters)

Pin configuration
1 = Base, 2 = Emitter, 3 = Collector.

FEATURES

- ◆ PNP Silicon Epitaxial Planar Transistors especially suited for application in class-B video output stages of TV receivers and monitors.
- ◆ As complementary types, the NPN transistors BF820 and BF822 are recommended.



MECHANICAL DATA

Case: SOT-23 Plastic Package

Weight: approx. 0.008 g

Marking code

BF821 = 1W

BF823 = 1Y

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

		Symbol	Value	Unit
Collector-Base Voltage	BF821	$-V_{CB0}$	300	V
	BF823	$-V_{CB0}$	250	V
Collector-Emitter Voltage	BF823	$-V_{CEO}$	250	V
Collector-Emitter Voltage	BF821	$-V_{CER}$	300	V
Emitter-Base Voltage		$-V_{EBO}$	5	V
Collector Current		$-I_C$	50	mA
Peak Collector Current		$-I_{CM}$	100	mA
Power Dissipation at $T_{SB} = 50\text{ }^{\circ}\text{C}$		P_{tot}	300 ¹⁾	mW
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_S	-65 to +150	°C

¹⁾ Device on fiberglass substrate, see layout

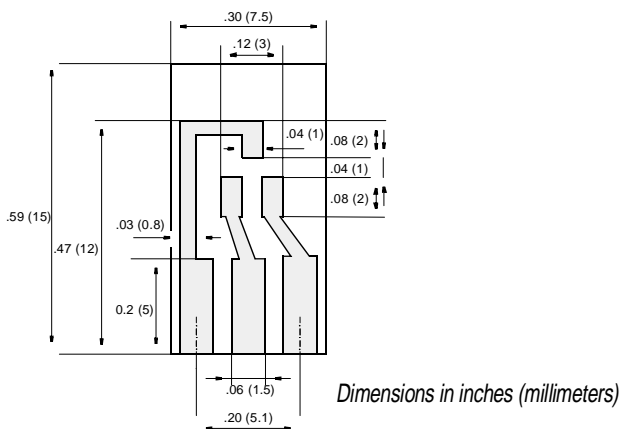
BF821, BF823

ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage at $-I_C = 100 \mu\text{A}$, $I_E = 0$	BF821 BF823 $-V_{(BR)CBO}$ $-V_{(BR)CBO}$	300 250	– –	– –	V V
Collector-Emitter Breakdown Voltage at $-I_C = 10 \text{ mA}$, $I_B = 0$	BF823 $-V_{(BR)CEO}$	250	–	–	V
Collector-Emitter Breakdown Voltage at $R_{BE} = 2.7 \text{ k}\Omega$, $-I_C = 10 \text{ mA}$	BF821 $-V_{(BR)CER}$	300	–	–	V
Emitter-Base Breakdown Voltage at $-I_E = 100 \mu\text{A}$, $I_C = 0$	$-V_{(BR)EBO}$	5	–	–	V
Collector-Base Cutoff Current at $-V_{CB} = 200 \text{ V}$, $I_E = 0$	$-I_{CBO}$	–	–	10	nA
Collector-Emitter Cutoff Current at $R_{BE} = 2.7 \text{ k}\Omega$, $-V_{CE} = 250 \text{ V}$ at $R_{BE} = 2.7 \text{ k}\Omega$, $-V_{CE} = 200 \text{ V}$, $T_j = 150 \text{ }^\circ\text{C}$	$-I_{CER}$ $-I_{CER}$			50 10	nA μA
Collector Saturation Voltage at $-I_C = 30 \text{ mA}$, $-I_B = 5 \text{ mA}$	$-V_{CEsat}$	–	–	0.8	V
DC Current Gain at $-V_{CE} = 20 \text{ V}$, $-I_C = 25 \text{ mA}$	h_{FE}	50	–	–	–
Gain-Bandwidth Product at $-V_{CE} = 10 \text{ V}$, $-I_C = 10 \text{ mA}$	f_T	60	–	–	MHz
Feedback Capacitance at $-V_{CE} = 30 \text{ V}$, $-I_C = 0$, $f = 1 \text{ MHz}$	C_{re}	–	–	1.6	pF
Thermal Resistance Junction to Ambient Air	R_{thJA}	–	–	430 ¹⁾	K/W

1) Device on fiberglass substrate, see layout



Layout for R_{thJA} test

Thickness: Fiberglass 0.059 in (1.5 mm)

Copper leads 0.012 in (0.3 mm)