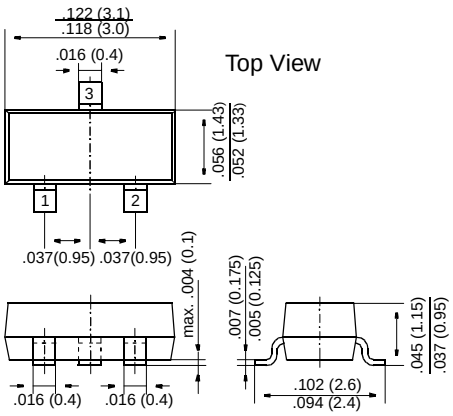
BF821, BF823

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** **BF823**	$-V_{CBO}$ $-V_{CBO}$	300 250	V 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 °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

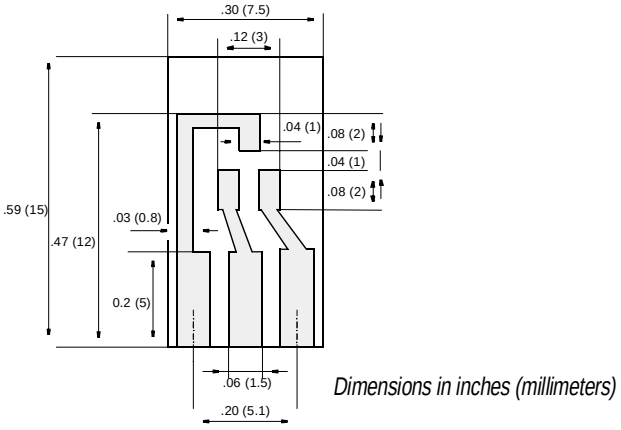
BF821, BF823

ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

		Symbol	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage at $-I_C$ = 100 µA, I_E = 0	**BF821** **BF823**	$-V_{(BR)CBO}$ $-V_{(BR)CBO}$	300 250	– –	– –	V V
Collector-Emitter Breakdown Voltage at $-I_C$ = 10 mA, I_B = 0	**BF823**	$-V_{(BR)CEO}$	250	–	–	V
Collector-Emitter Breakdown Voltage at R_{BE} = 2.7 kΩ, $-I_C$ = 10 mA	**BF821**	$-V_{(BR)CER}$	300	–	–	V
Emitter-Base Breakdown Voltage at $-I_E$ = 100 µA, I_C = 0		$-V_{(BR)EBO}$	5	–	–	V
Collector-Base Cutoff Current at $-V_{CB}$ = 200 V, I_E = 0		$-I_{CBO}$	–	–	10	nA
Collector-Emitter Cutoff Current at R_{BE} = 2.7 kΩ, $-V_{CE}$ = 250 V at R_{BE} = 2.7 kΩ, $-V_{CE}$ = 200 V, T_j = 150 °C		 $-I_{CER}$ $-I_{CER}$			 50 10	 nA µA
Collector Saturation Voltage at $-I_C$ = 30 mA, $-I_B$ = 5 mA		$-V_{CEsat}$	–	–	0.8	V
DC Current Gain at $-V_{CE}$ = 20 V, $-I_C$ = 25 mA		h_{FE}	50	–	–	–
Gain-Bandwidth Product at $-V_{CE}$ = 10 V, $-I_C$ = 10 mA		f_T	60	–	–	MHz
Feedback Capacitance at $-V_{CE}$ = 30 V, $-I_C$ = 0, f = 1 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



Dimensions in inches (millimeters)

Layout for R_{thJA} test

Thickness: Fiberglass 0.059 in (1.5 mm)
Copper leads 0.012 in (0.3 mm)

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