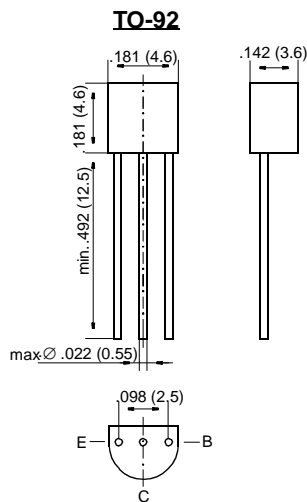


BF420, BF422

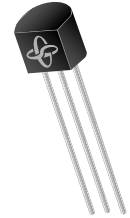
Small Signal Transistors (NPN)



Dimensions in inches and (millimeters)

FEATURES

- ◆ NPN Silicon Epitaxial Planar Transistors especially suited for application in class-B video output stages of TV receivers and monitors.
- ◆ As complementary types, the PNP transistors BF421 and BF423 are recommended



MECHANICAL DATA

Case: TO-92 Plastic Package

Weight: approx. 0.18 g

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

		Symbol	Value	Unit
Collector-Base Voltage	BF420	V_{CBO}	300	V
	BF422	V_{CBO}	250	V
Collector-Emitter Voltage	BF422	V_{CEO}	250	V
Collector-Emitter Voltage	BF420	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 $T_{amb} = 25\text{ °C}$		P_{tot}	830 ¹⁾	mW
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_S	-65 to +150	°C

¹⁾ Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case

BF420, BF422

ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage at $I_C = 100 \mu\text{A}$, $I_B = 0$	BF420 BF422 $V_{(BR)CBO}$ $V_{(BR)CBO}$	300 250	– –	– –	V V
Collector-Emitter Breakdown Voltage at $I_C = 10 \text{ mA}$, $I_E = 0$	BF422 $V_{(BR)CEO}$	250	–	–	V
Collector-Emitter Breakdown Voltage at $R_{BE} = 2.7 \text{ k}\Omega$, $I_C = 10 \text{ mA}$	BF420 $V_{(BR)CER}$	300	–	–	V
Emitter-Base Breakdown Voltage at $I_E = 100 \mu\text{A}$, $I_B = 0$	$V_{(BR)EBO}$	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}	–	–	0.6	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}	–	–	150 ¹⁾	K/W
1) Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case					