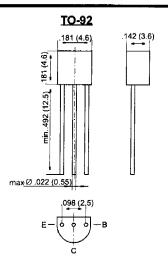
20 STERN AVE. SPRINGFIELD, NEW JERSEY 07081 U.S.A. TELEPHONE: (973) 376-2922

(212) 227-6005

FAX: (973) 376-8960

# 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	Uni
Collector-Base Voltage	BF420 BF422	V <sub>CBO</sub>	300 250	V
Collector-Emitter Voltage	BF422	V <sub>CEO</sub>	250	V
Collector-Emitter Voltage	BF420	V <sub>CER</sub>	300	V
Emitter-Base Voltage		V <sub>EBO</sub>	5	V
Collector Current		lc	50	mA
Peak Collector Current		Ісм	100	mA
Power Dissipation at T <sub>amb</sub> = 25 °C		P <sub>tot</sub>	830 <sup>1)</sup>	mW
Junction Temperature		Тј	150	°C
Storage Temperature Range		T <sub>S</sub>	-65 to +150	°C



# BF420, BF422

## **ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Min.	Тур.	Max.	Unit
Collector-Base Breakdown Voltage at $I_C = 100 \mu A$ , $I_B = 0$ BF422	V <sub>(BR)CBO</sub> V <sub>(BR)CBO</sub>	300 250	- -	_	V
Collector-Emitter Breakdown Voltage BF422 at $I_C = 10$ mA, $I_E = 0$	V <sub>(BR)CEO</sub>	250	-	_	V
Collector-Emitter Breakdown Voltage BF420 at $R_{BE}$ = 2.7 k $\Omega$ , $I_{C}$ = 10 mA	V <sub>(BR)CER</sub>	300	_		V
Emitter-Base Breakdown Voltage at $I_E = 100 \mu A$ , $I_B = 0$	V <sub>(BR)EBO</sub>	5	_	_	V
Collector-Base Cutoff Current at V <sub>CB</sub> = 200 V, I <sub>E</sub> = 0	I <sub>CBO</sub>	· <u> </u>	-	10	nA
Collector-Emitter Cutoff Current at $R_{BE}$ = 2.7 k $\Omega$ , $V_{CE}$ = 250 V at $R_{BE}$ = 2.7 k $\Omega$ , $V_{CE}$ = 200 V, $T_j$ = 150 °C	I <sub>CER</sub> I <sub>CER</sub>			50 10	nA μA
Collector Saturation Voltage at I <sub>C</sub> = 30 mA, I <sub>B</sub> = 5 mA	V <sub>CEsat</sub>	_	_	0.6	V
DC Current Gain at V <sub>CE</sub> = 20 V, I <sub>C</sub> = 25 mA	h <sub>FE</sub>	50	_	_	_
Gain-Bandwidth Product at V <sub>CE</sub> = 10 V, I <sub>C</sub> = 10 mA	f <sub>T</sub>	60	_	_	MHz
Feedback Capacitance at V <sub>CE</sub> = 30 V, I <sub>C</sub> = 0, f = 1 MHz	C <sub>re</sub>	_		1.6	pF
Thermal Resistance Junction to Ambient Air	R <sub>thJA</sub>	_	_	150 <sup>1)</sup>	K/W

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