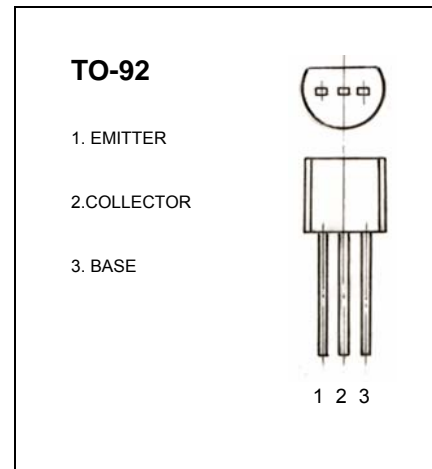


## BF420 TRANSISTOR (NPN) BF422

### FEATURES

- Low feedback capacitance.
- NPN transistors in a TO-92 plastic package.  
PNP complements: BF421 and BF423
- Class-B video output stages in colour television and professional monitor equipment.



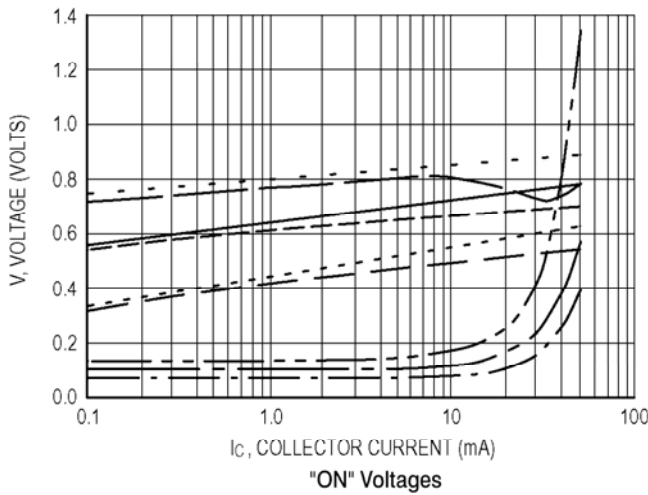
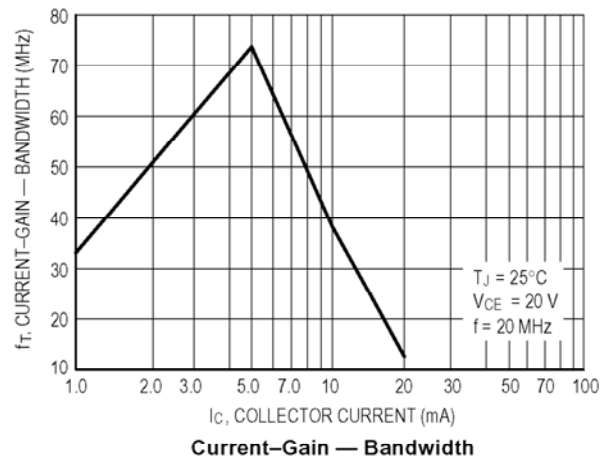
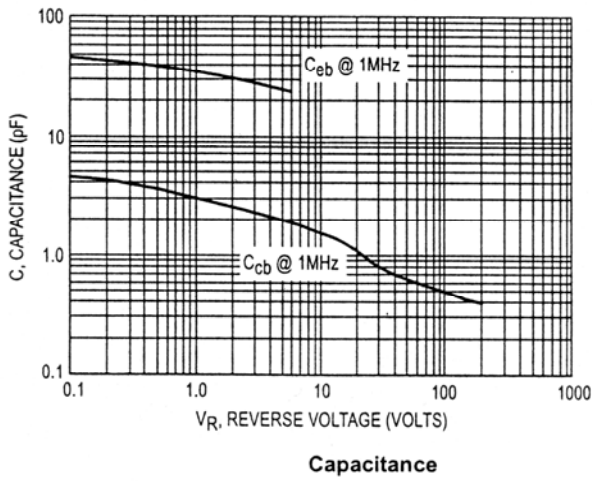
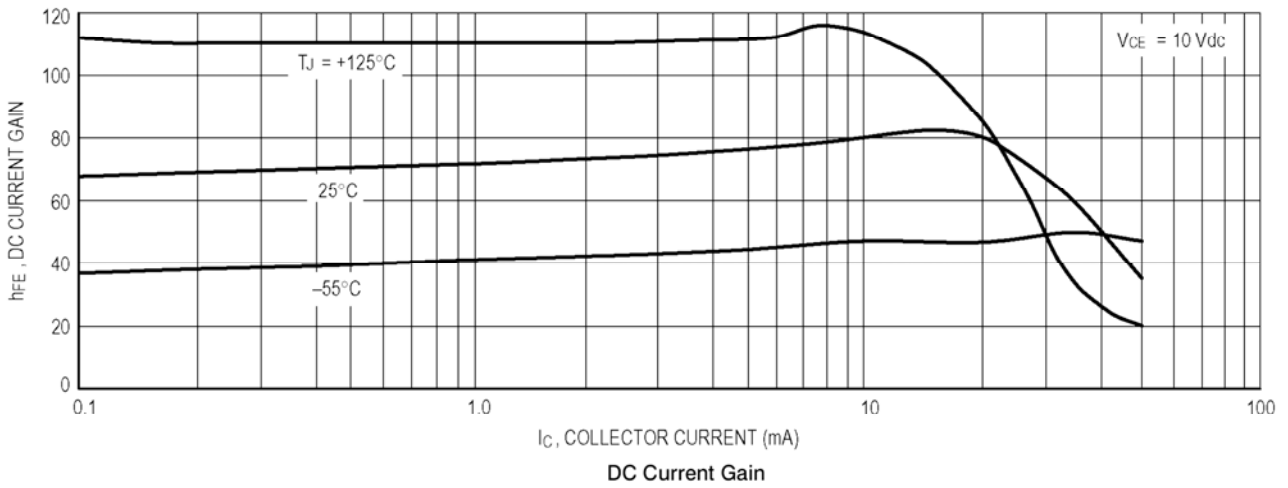
### MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise noted)

Symbol	Parameter	BF420	BF422	Units
V <sub>CBO</sub>	Collector-Base Voltage	300	250	V
V <sub>CEO</sub>	Collector-Emitter Voltage	300	250	V
V <sub>EBO</sub>	Emitter-Base Voltage	5		V
I <sub>C</sub>	Collector Current -Continuous	100		mA
P <sub>C</sub>	Collector Power Dissipation	0.83		W
R <sub>th j-a</sub>	thermal resistance from junction to ambient	150		°C/W
T <sub>j</sub>	junction temperature	150		°C
T <sub>stg</sub>	Storage Temperature Range	-65to150		°C

### ELECTRICAL CHARACTERISTICS (T<sub>amb</sub>=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	BF420 BF422 V <sub>(BR)CBO</sub>	I <sub>C</sub> =100μA, I <sub>E</sub> =0	300 250		V
Collector-emitter breakdown voltage	BF420 BF422 V <sub>(BR)CEO</sub>	I <sub>C</sub> = 1mA, I <sub>B</sub> =0	300 250		V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =100μA, I <sub>C</sub> =0	5		V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =200V, I <sub>E</sub> =0		0.01	μ A
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0		0.05	μ A
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> =20V, I <sub>C</sub> =25mA	50		
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =30mA, I <sub>B</sub> = 5mA		0.6	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> = 10mA f=100MHz	60		MHz
Feedback capacitance	C <sub>re</sub>	V <sub>CE</sub> =30V, I <sub>C</sub> =0, f=1MHz		1.6	pF

# Typical Characteristics



- $V_{CEsat}$  @  $25^\circ\text{C}$ ,  $I_{CLB} = 10$
- - -  $V_{CEsat}$  @  $125^\circ\text{C}$ ,  $I_{CLB} = 10$
- · ·  $V_{CEsat}$  @  $-55^\circ\text{C}$ ,  $I_{CLB} = 10$
- $V_{BEsat}$  @  $25^\circ\text{C}$ ,  $I_{CLB} = 10$
- - -  $V_{BEsat}$  @  $125^\circ\text{C}$ ,  $I_{CLB} = 10$
- · ·  $V_{BEsat}$  @  $-55^\circ\text{C}$ ,  $I_{CLB} = 10$
- $V_{BE}$  @  $25^\circ\text{C}$ ,  $V_{CE} = 10\text{ V}$
- - -  $V_{BE}$  @  $125^\circ\text{C}$ ,  $V_{CE} = 10\text{ V}$
- · ·  $V_{BE}$  @  $-55^\circ\text{C}$ ,  $V_{CE} = 10\text{ V}$