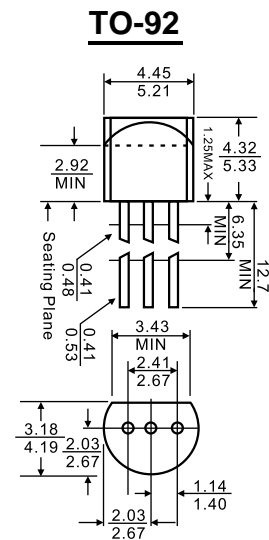




1. EMITTER
2. COLLECTOR
3. BASE

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 ($T_A=25^\circ\text{C}$ unless otherwise noted)

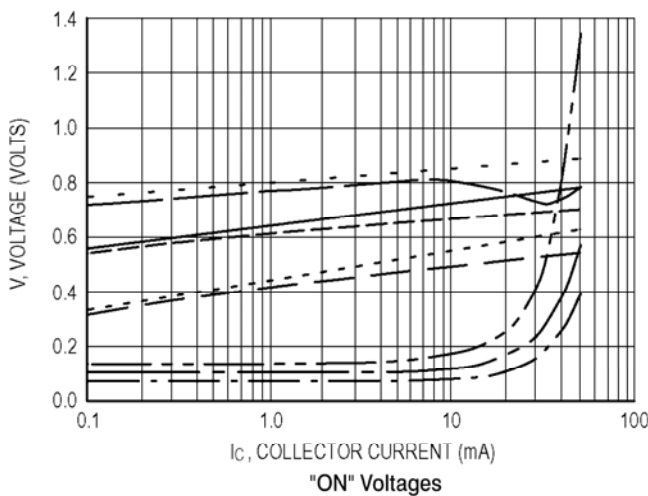
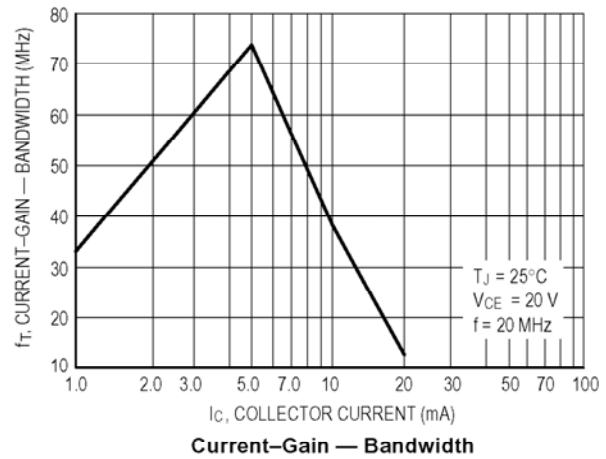
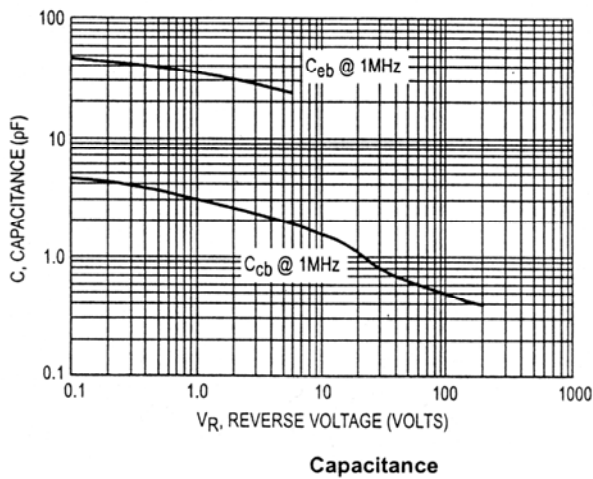
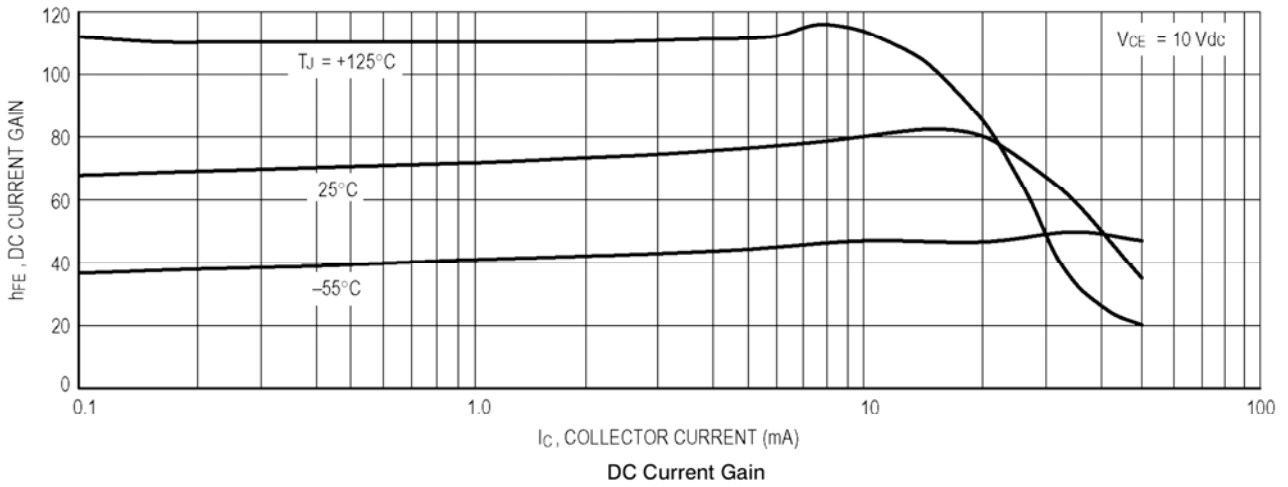
Dimensions in inches and (millimeters)

Symbol	Parameter	BF420	BF422	Units
V_{CBO}	Collector-Base Voltage	300	250	V
V_{CEO}	Collector-Emitter Voltage	300	250	V
V_{EBO}	Emitter-Base Voltage	5		V
I_C	Collector Current -Continuous	100		mA
P_C	Collector Power Dissipation	0.83		W
$R_{th\ j-a}$	thermal resistance from junction to ambient	150		$^\circ\text{C}/\text{W}$
T_j	junction temperature	150		$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65to150		$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	BF420 BF422 $V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	300 250		V
Collector-emitter breakdown voltage	BF420 BF422 $V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	300 250		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	5		V
Collector cut-off current	I_{CBO}	$V_{CB}=200\text{V}, I_E=0$		0.01	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$		0.05	μA
DC current gain	h_{FE}	$V_{CE}=20\text{V}, I_C=25\text{mA}$	50		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=30\text{mA}, I_B=5\text{mA}$		0.6	V
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=10\text{mA}$ $f=100\text{MHz}$	60		MHz
Feedback capacitance	C_{re}	$V_{CE}=30\text{V}, I_C=0, f=1\text{MHz}$		1.6	pF

Typical Characteristics



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