



TO-92 Plastic-Encapsulate Transistors

BF420 BF422

TRANSISTOR (NPN)

FEATURES

Power dissipation

$$P_{CM} : 0.83 \text{ W } (T_{amb}=25)$$

Collector current

$$I_{CM} : 0.1 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO} : \text{BF420 } 300 \text{ V}$$
$$\text{BF422 } 250 \text{ V}$$

Operating and storage junction temperature range

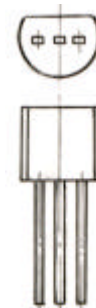
$$T_J, T_{stg}: -55 \text{ to } +150$$

TO—92

1. EMITTER

2. COLLECTOR

3. BASE



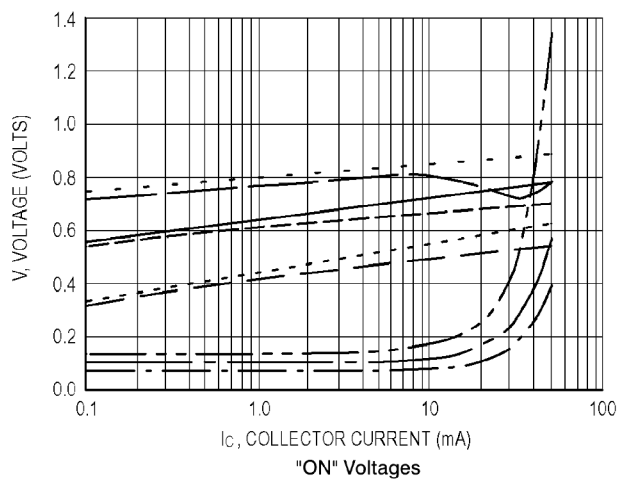
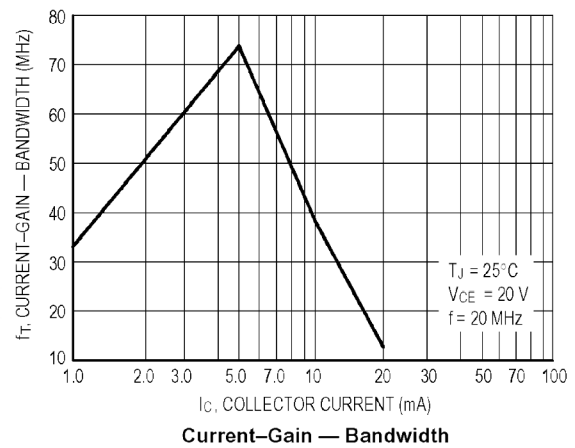
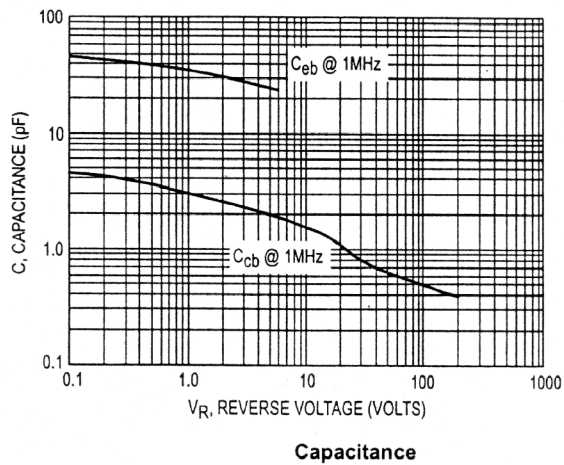
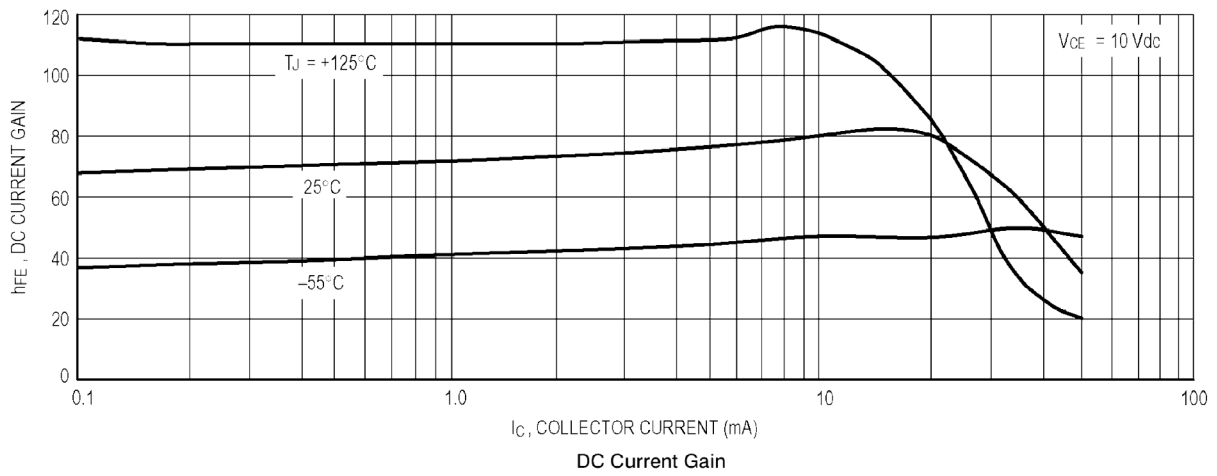
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ELECTRICAL CHARACTERISTICS ($T_{amb}=25$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage BF420 BF422	V_{CBO}	$I_C=100 \mu A$, $I_E=0$	300 250		V
Collector-emitter breakdown voltage BF420 BF422	V_{CEO}	$I_C=1mA$, $I_B=0$	300 250		V
Emitter-base breakdown voltage	V_{EBO}	$I_E=100 \mu A$, $I_C=0$	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	$h_{FE(1)}$	$V_{CE}=20 \text{ V}$, $I_C=25mA$	50		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=30 \text{ mA}$, $I_B=5mA$		0.6	V
Transition frequency	f_T	$V_{CE}=10V$, $I_C=10mA$ $f=100MHz$	60		MHz

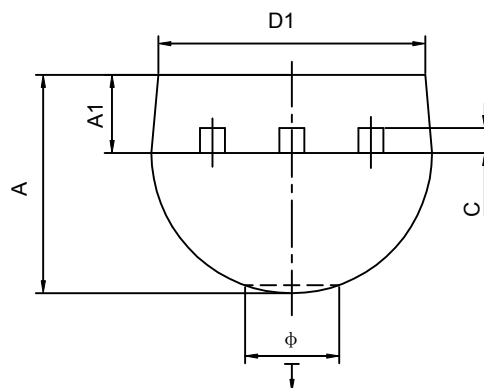
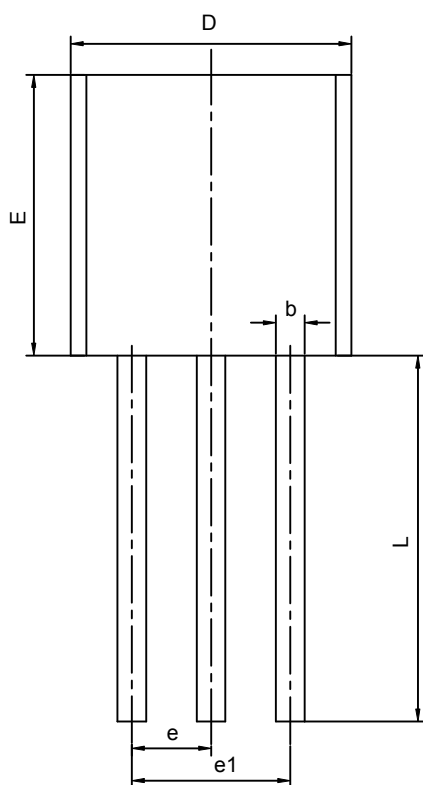
Typical Characteristics

BF420



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

TO-92 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.400	4.700	0.173	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270TYP		0.050TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Ö		1.600		0.063
$\downarrow$	0.000	0.380	0.000	0.015