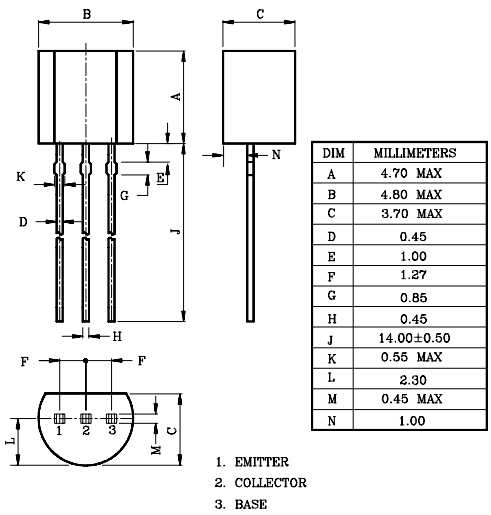
BF421

SILICON PNP TRIPLE DIFFUSED TYPE

HIGH VOLTAGE SWITCHING AND AMPLIFIER APPLICATION.
COLOR TV CHROMA OUTPUT APPLICATIONS.

FEATURES

- High Voltage : V_{CEO}>-300V
- Complementary to BF420.



DIM	MILLIMETERS
A	4.70 MAX
B	4.80 MAX
C	3.70 MAX
D	0.45
E	1.00
F	1.27
G	0.85
H	0.45
J	14.00±0.50
K	0.55 MAX
L	2.30
M	0.45 MAX
N	1.00

TO-92

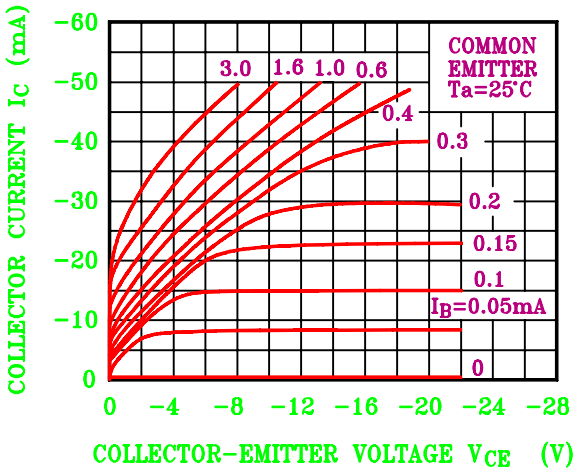
MAXIMUM RATINGS (Ta=25℃)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	-300	V
Collector-Emitter Voltage		V_{CEO}	-300	V
Emitter-Base Voltage		V_{EBO}	-5	V
Collector Current	DC	I_C	-50	mA
	Peak	I_{CP}	-100	
Collector Power Dissipation		P_C	625	mW
Base Current		I_B	-50	mA
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	-65~150	℃

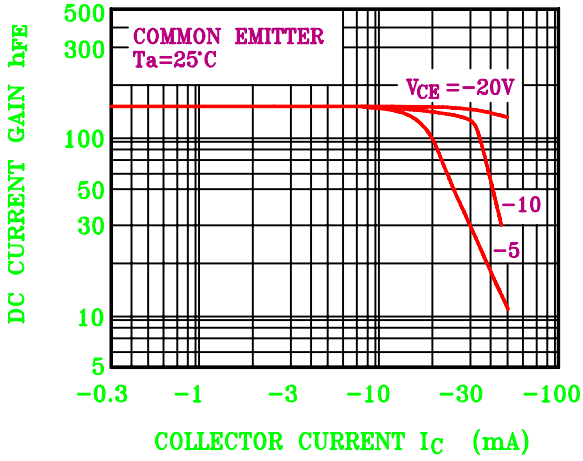
ELECTRICAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB}=-200V, I_E=0	-	-	-10	nA
		V_{CB}=-200V, I_E=0, Tj=150℃	-	-	-10	μA
Emitter Cut-off Current	I_{EBO}	V_{EB}=-5V, I_C=0	-	-	-50	nA
DC Current Gain	h_{FE}	V_{CE}=-20V, I_C=-25mA	50	-	-	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=-30mA, I_B=-5mA	-	-	-0.6	V
Base-Emitter Voltage	V_{BE}	V_{CE}=-20V, I_C=-25mA	-	-0.75	-	V
Transition Frequency	f_T	V_{CE}=-10V, I_C=-10mA	60	-	-	MHz
Reverse Transfer Capacitance	C_{re}	V_{CB}=-30V, I_E=0, f=1MHz	-	-	1.6	pF

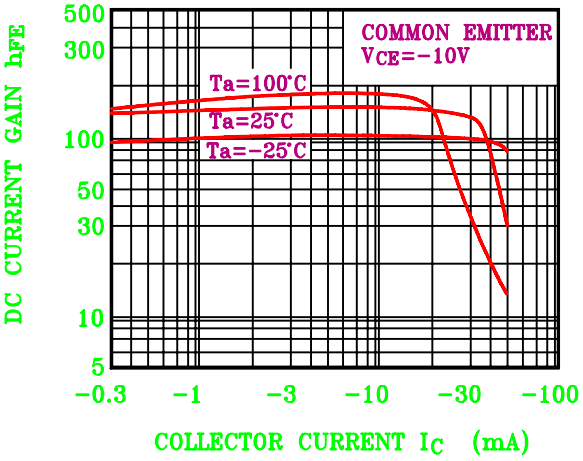
I_C – V_{CE} (LOW VOLTAGE REGION)



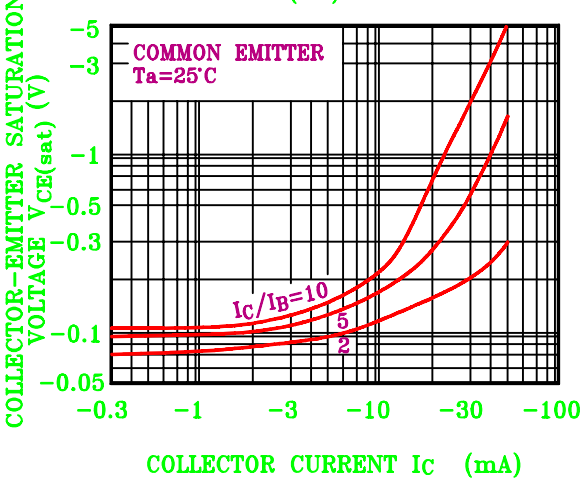
h_{FE} – I_C



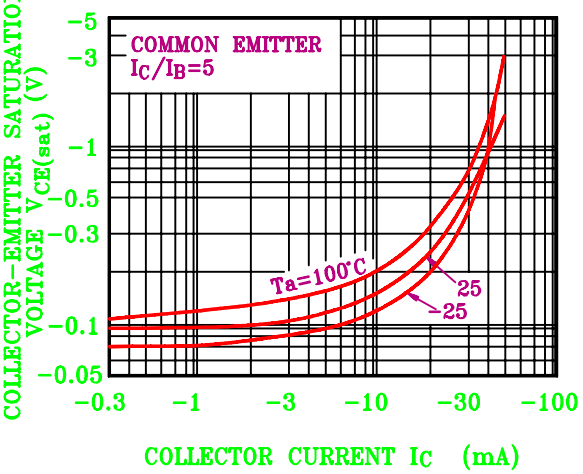
h_{FE} – I_C



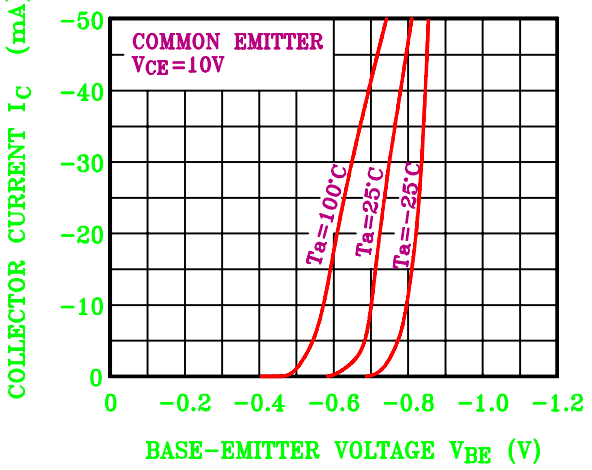
$V_{CE(sat)}$ – I_C

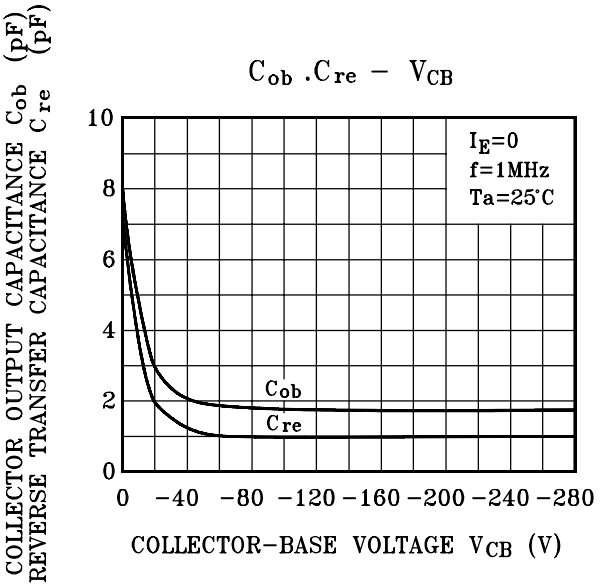


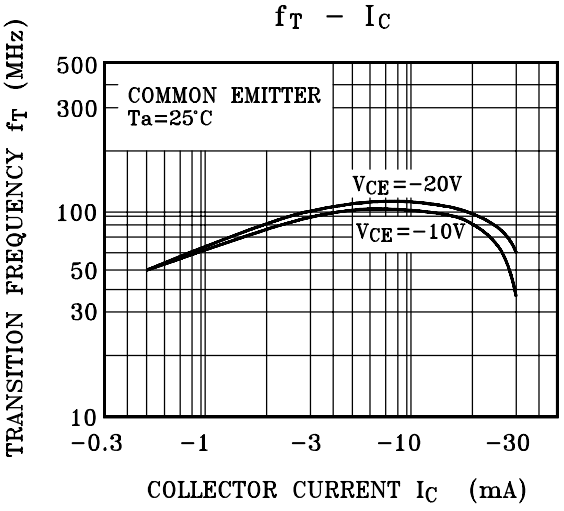
$V_{CE(sat)}$ – I_C

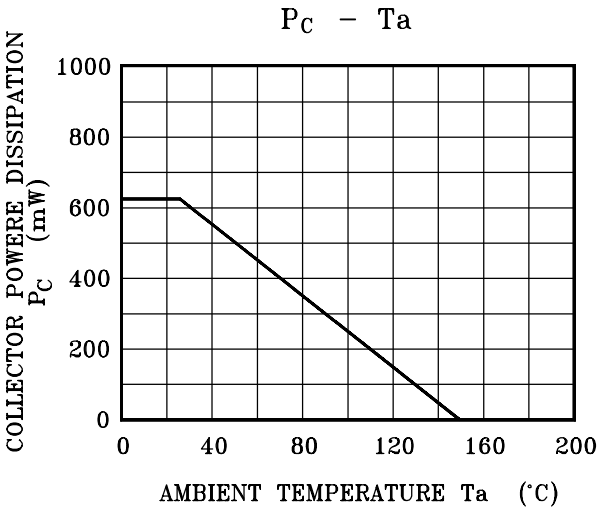


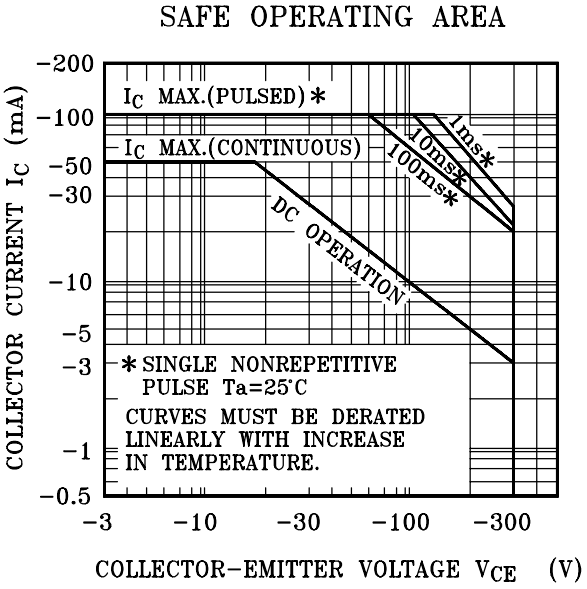
I_C – V_{BE}




C_{ob} .C_{re} – V_{CB}
COLLECTOR OUTPUT CAPACITANCE C_{ob} (pF)
REVERSE TRANSFER CAPACITANCE C_{re} (pF)
I_E=0
f=1MHz
Ta=25°C
C_{ob}
C_{re}
10
8
6
4
2
0
0 −40 −80 −120 −160 −200 −240 −280
COLLECTOR-BASE VOLTAGE V_{CB} (V)


f_T – I_C
TRANSITION FREQUENCY f_T (MHz)
COMMON EMITTER
Ta=25°C
V_{CE}=−20V
V_{CE}=−10V
500
300
100
50
30
10
−0.3 −1 −3 −10 −30
COLLECTOR CURRENT I_C (mA)


P_C – Ta
COLLECTOR POWERE DISSIPATION P_C (mW)
1000
800
600
400
200
0
0 40 80 120 160 200
AMBIENT TEMPERATURE Ta (°C)


SAFE OPERATING AREA
COLLECTOR CURRENT I_C (mA)
I_C MAX.(PULSED)*
I_C MAX.(CONTINUOUS)
1ms*
10ms*
100ms*
DC OPERATION
* SINGLE NONREPETITIVE
PULSE Ta=25°C
CURVES MUST BE DERATED
LINEARLY WITH INCREASE
IN TEMPERATURE.
−200
−100
−50
−30
−10
−5
−3
−1
−0.5
−3 −10 −30 −100 −300
COLLECTOR-EMITTER VOLTAGE V_{CE} (V)