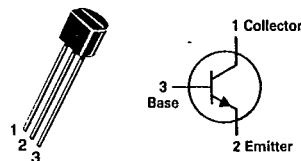


MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CE0}	40	Vdc
Collector-Base Voltage	V_{CBO}	40	Vdc
Emitter-Base Voltage	V_{EBO}	4.0	Vdc
Collector Current – Continuous	I_C	25	mA dc
Total Device Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	350 2.8	mW mW/ $^\circ\text{C}$
Total Device Dissipation @ $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	1.0 8.0	Watt mW/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	125	$^\circ\text{C/W}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	357	$^\circ\text{C/W}$

BF240
BF241CASE 29-04, STYLE 21
TO-92 (TO-226AA)

AM/FM TRANSISTORS

NPN SILICON

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

Characteristic	Symbol	Min.	Typ.	Max.	Unit
OFF CHARACTERISTICS					
Collector-Emitter Breakdown Voltage (1) ($I_C = 1 \text{ mA dc}, I_E = 0$)	$V_{(BR)CEO}$	40			Vdc
Collector-Base Breakdown Voltage ($I_C = 100 \mu\text{A dc}, I_E = 0$)	$V_{(BR)CBO}$	40			Vdc
Emitter-Base Breakdown Voltage ($I_E = 10 \mu\text{A dc}, I_C = 0$)	$V_{(BR)EBO}$	4			Vdc
Collector Cutoff Current ($V_{CB} = 20 \text{ Vdc}, I_E = 0$)	I_{CBO}			100	nA dc
ON CHARACTERISTICS					
DC Current Gain ($I_C = 1 \text{ mA dc}, V_{CE} = 10 \text{ Vdc}$)	h_{FE}	65 35		220 125	—
Base-Emitter On Voltage ($I_C = 1.0 \text{ mA dc}, V_{CE} = 10 \text{ Vdc}$)	$V_{BE(on)}$	0.65	0.70	0.74	Vdc
SMALL-SIGNAL CHARACTERISTICS					
Current Gain–Bandwidth Product ($I_C = 1.0 \text{ mA dc}, V_{CE} = 10 \text{ Vdc}, f = 100 \text{ MHz}$)	f_T		600 470		MHz
Common Emitter Feedback Capacitance ($V_{CB} = 10 \text{ Vdc}, I_E = 0, f = 1.0 \text{ MHz}$)	C_{re}		0.28	0.34	pF

(1) Pulse test: Pulse Width $\leq 300 \mu\text{s}$. Duty cycle $\leq 2.0\%$.

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FIGURE 1 - CURRENT GAIN-BANDWIDTH PRODUCT

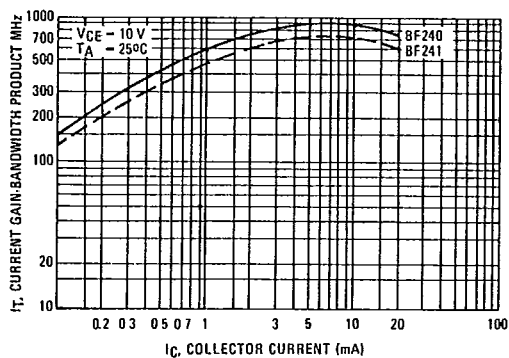


FIGURE 2 - CAPACITANCES

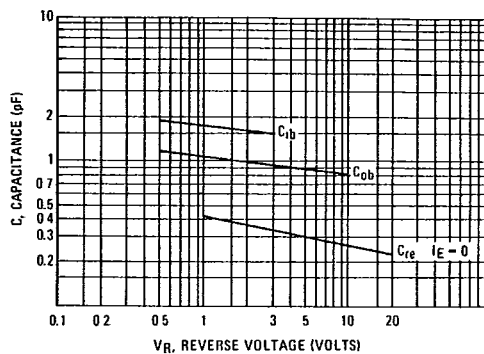
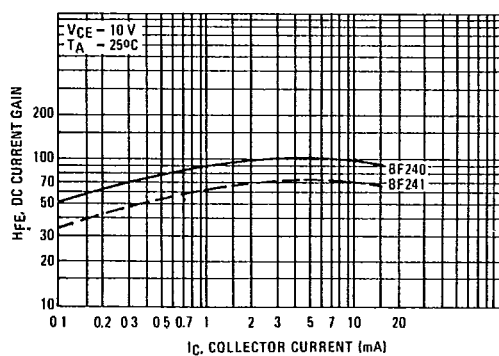
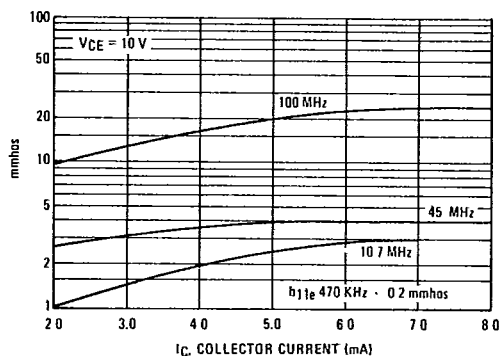
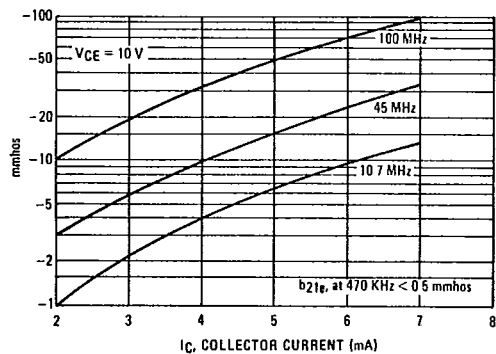
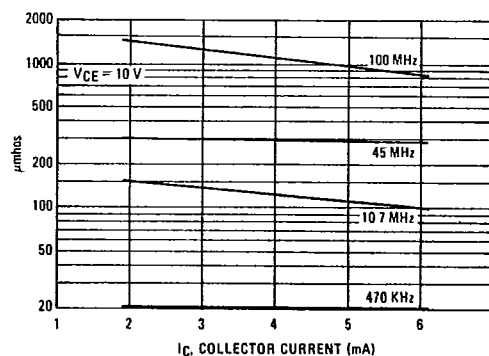
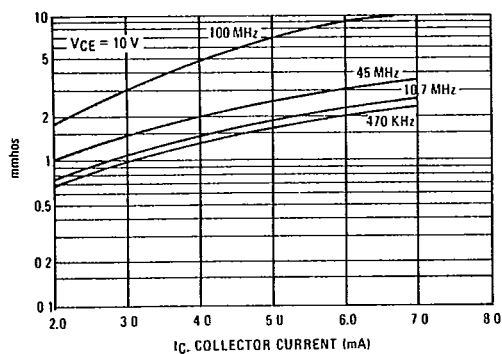
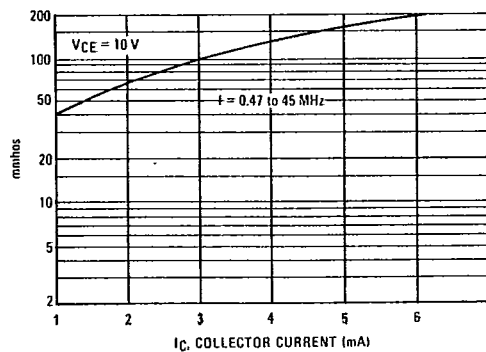


FIGURE 3 - DC CURRENT GAIN

FIGURE 4 - b_{11e} FIGURE 5 - b_{21e} FIGURE 6 - b_{22e} (boe)

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FIGURE 7 - g_{11e} (gie)FIGURE 8 - g_{21e} (Yfe)FIGURE 9 - g_{22e} (goe)