

# Transistors

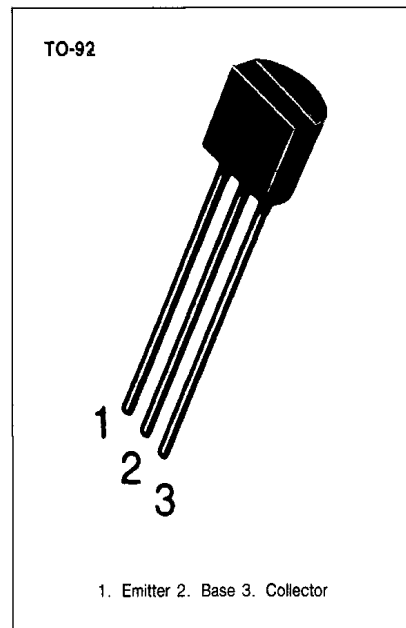
## 2SC184

### AM FREQUENCY CONVERTER IF AMPLIFIER

- Current Gain Bandwidth Product  $f_T = 100\text{MHz}$  (Typ)
- Complement to KSA542

### ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CBO}$	30	V
Collector-Emitter Voltage	$V_{CEO}$	25	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	50	mA
Collector Dissipation	$P_C$	250	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 ~ 150	$^\circ\text{C}$



### ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

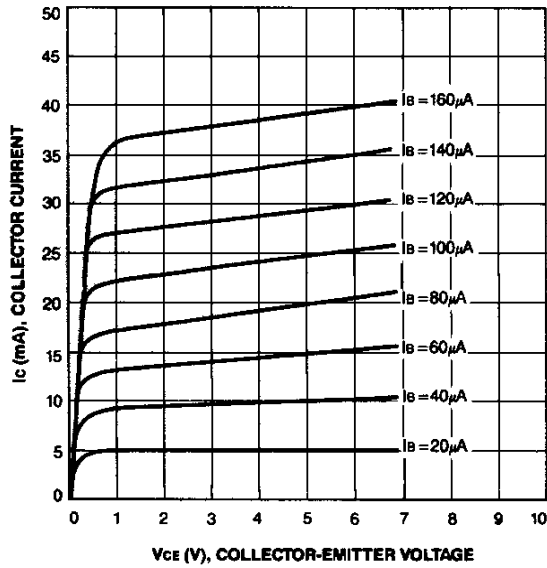
Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C = 100\mu\text{A}, I_E = 0$	30			V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C = 10\text{mA}, I_B = 0$	25			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	5			V
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 25\text{V}, I_E = 0$			0.1	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 5\text{V}, I_C = 0$			0.1	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE} = 6\text{V}, I_C = 1\text{mA}$	40		1000	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 10\text{mA}, I_B = 1\text{mA}$		0.1	0.2	V
Current Gain-Bandwidth Product	$f_T$	$V_{CE} = 6\text{V}, I_C = 1\text{mA}$		100		MHz
Output Capacitance	$C_{ob}$	$V_{CB} = 6\text{V}, I_E = 0$ $f = 1\text{MHz}$		2.6	4.4	pF

### $h_{FE}$ CLASSIFICATION

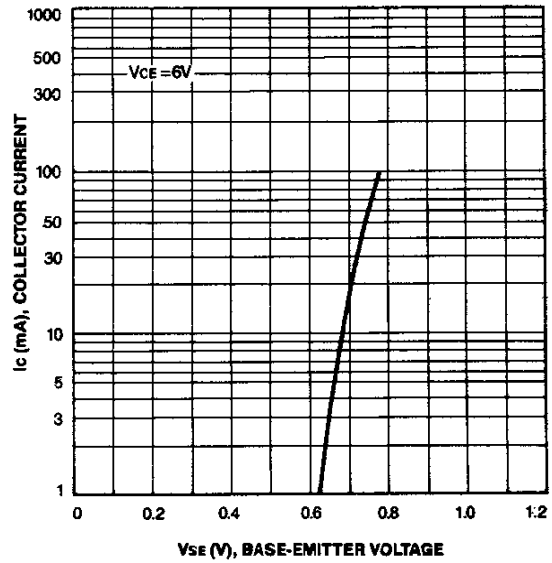
Classification	R	O	Y	G	L	V
$h_{FE}$	40-80	70-140	120-240	200-400	350-700	600-1000



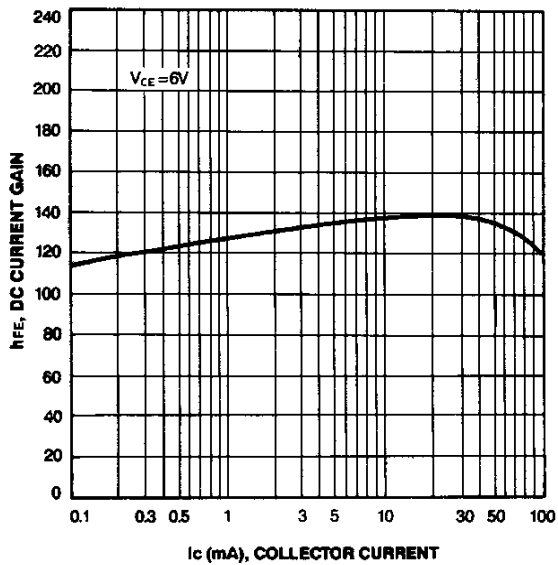
**STATIC CHARACTERISTIC**



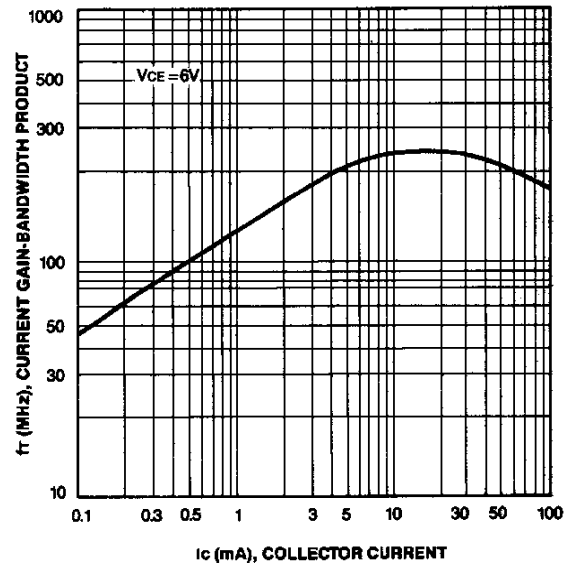
**BASE-EMITTER ON VOLTAGE**



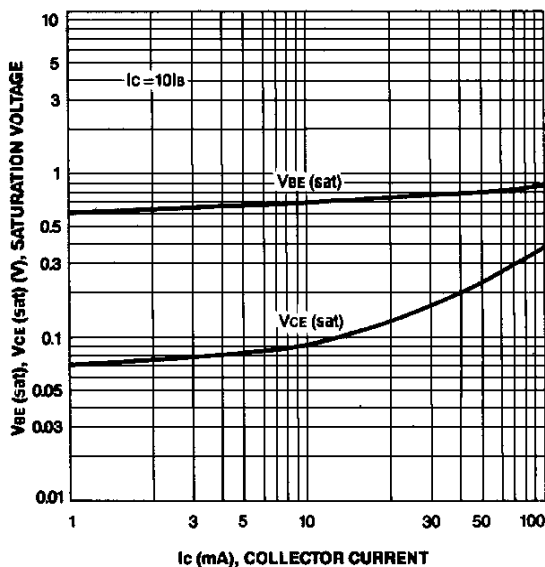
**DC CURRENT GAIN**



**CURRENT GAIN-BANDWIDTH PRODUCT**



**BASE-EMITTER SATURATION VOLTAGE  
COLLECTOR-EMITTER SATURATION VOLTAGE**



**COLLECTOR OUTPUT CAPACITANCE**

