

# Transistors

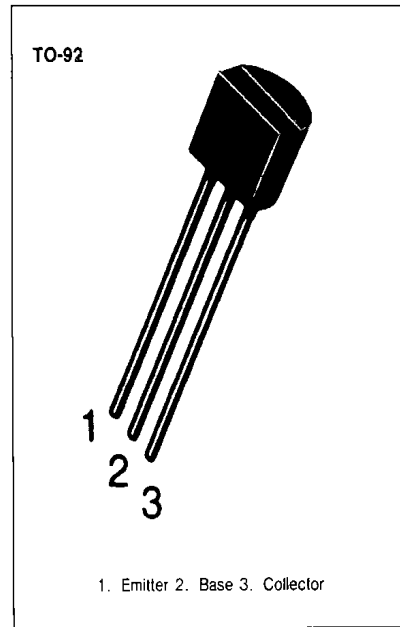
## 2SB564A

### AUDIO FREQUENCY POWER AMPLIFIER

- Collector Current  $I_C = -1A$
- Collector Dissipation  $P_C = 800mW$

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

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	$I_C$	-1.0	A
Collector Dissipation	$P_C$	800	mW
Junction Temperature	$T_J$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 ~ 150	$^\circ C$



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

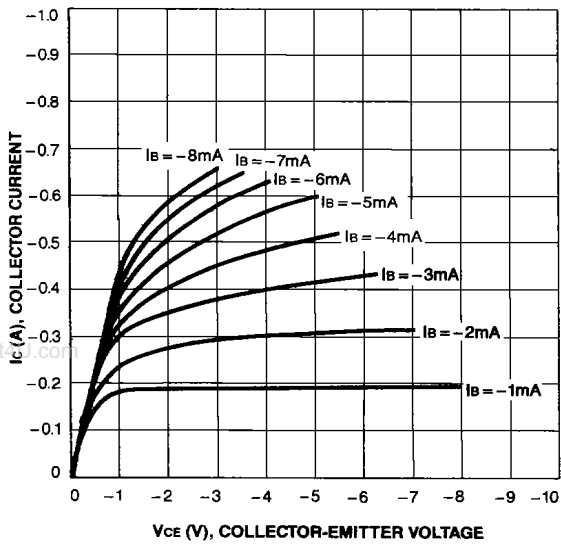
Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C = -100\mu A, I_E = 0$	-30			V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C = -10mA, I_B = 0$	-25			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E = -100\mu A, I_C = 0$	-5			V
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = -30V, I_E = 0$			-0.1	$\mu A$
DC Current Gain	$h_{FE}$	$V_{CE} = -1V, I_C = -100mA$	70		400	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -1A, I_B = -0.1A$			-0.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -1A, I_B = -0.1A$			-1.2	V
Current-Gain-Bandwidth Product	$f_T$	$V_{CE} = -6V, I_C = -10mA$		110		MHz
Output Capacitance	$C_{ob}$	$V_{CB} = -6V, f = 1 MHz, I_E = 0$		18		pF

### $h_{FE}$ CLASSIFICATION

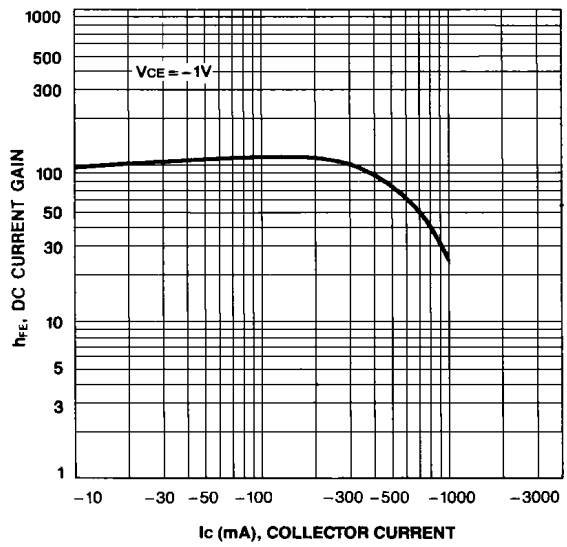
Classification	O	Y	G
$h_{FE}$	70-140	120-240	200-400



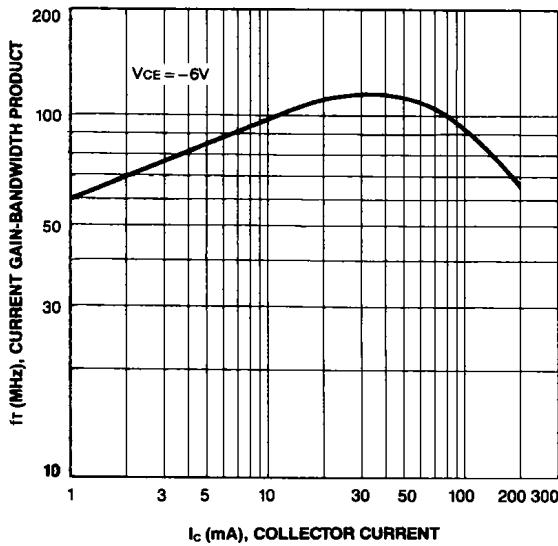
**STATIC CHARACTERISTIC**



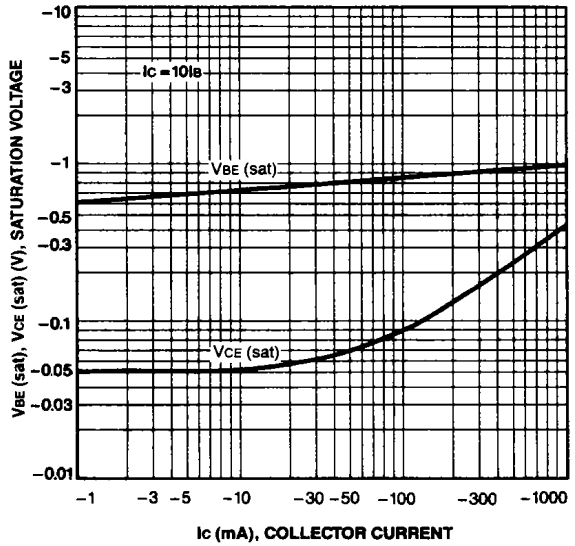
**DC CURRENT GAIN**



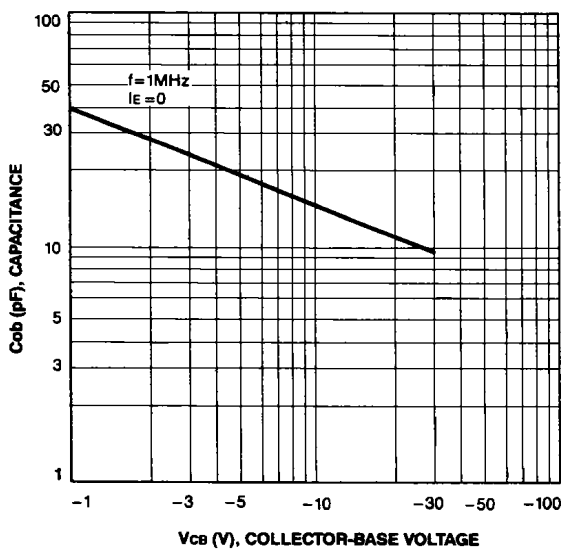
**CURRENT GAIN-BANDWIDTH PRODUCT**



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



**COLLECTOR OUTPUT CAPACITANCE**



**SAFE OPERATING AREA**

