

# Transistors

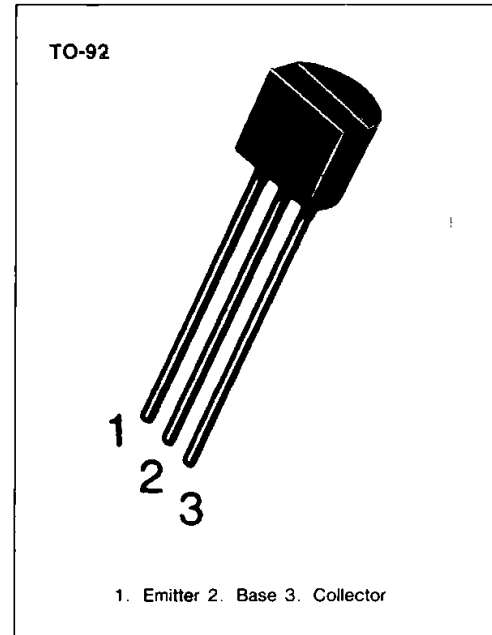
## 2SC9018

### AM/FM IF AMPLIFIER, LOCAL OSCILLATOR OF FM/VHF TUNER

• High Current Gain Bandwidth Product  $f_T = 1,100$  MHz (Typ)

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CBO}$	30	V
Collector-Emitter Voltage	$V_{CEO}$	15	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	50	mA
Collector Dissipation	$P_C$	400	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55~150	$^\circ\text{C}$



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

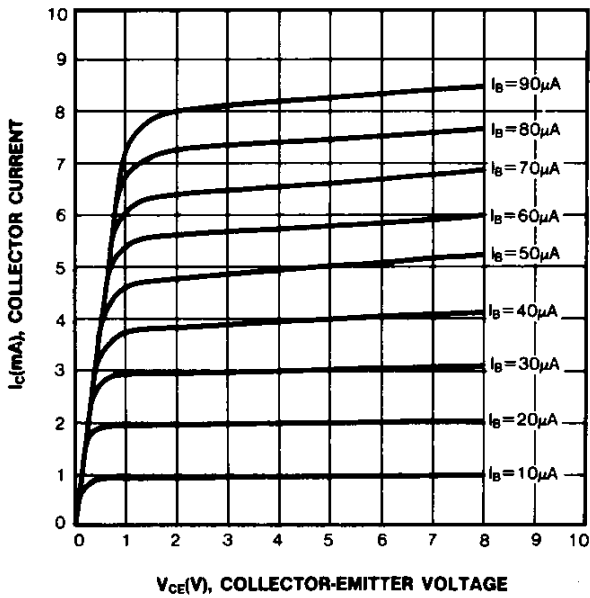
Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C = 100\mu\text{A}$ , $I_E = 0$	30			V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C = 1.0\text{mA}$ , $I_B = 0$	15			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E = 100\mu\text{A}$ , $I_C = 0$	5			V
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 12\text{V}$ , $I_E = 0$			50	nA
DC Current Gain	$h_{FE}$	$V_{CE} = 5\text{V}$ , $I_C = 1.0\text{mA}$	28	100	198	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 10\text{mA}$ , $I_B = 1\text{mA}$			0.5	V
Output Capacitance	$C_{ob}$	$V_{CB} = 10\text{V}$ , $I_E = 0$ $f = 1\text{MHz}$		1.3	1.7	pF
Current Gain-Bandwidth Product	$f_T$	$V_{CE} = 5\text{V}$ , $I_C = 5\text{mA}$	700	1100		MHz

### $h_{FE}$ CLASSIFICATION

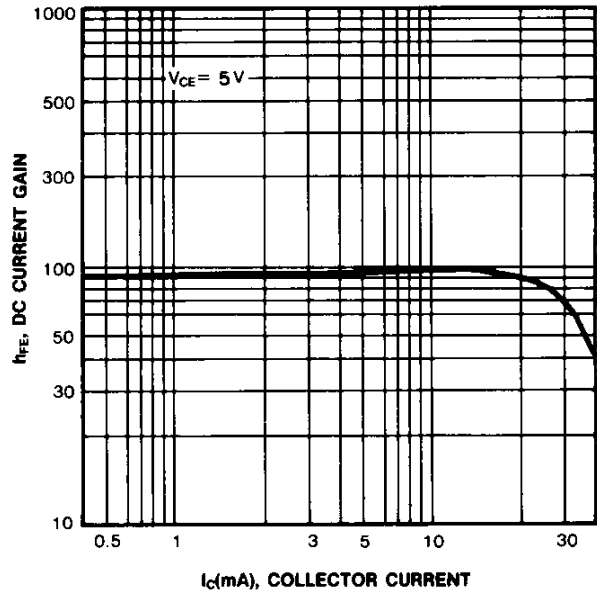
Classification	D	E	F	G	H	I
$h_{FE}$	28-45	39-60	54-80	72-108	97-146	132-198



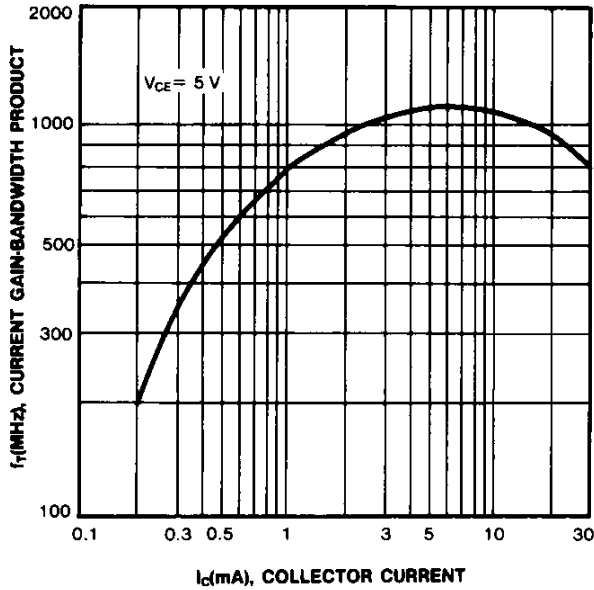
**STATIC CHARACTERISTIC**



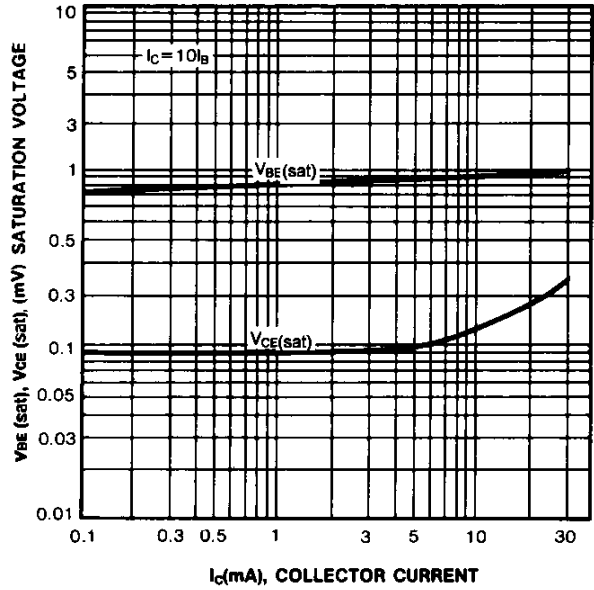
**DC CURRENT GAIN**



**CURRENT GAIN-BANDWIDTH PRODUCT**



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



**OUTPUT CAPACITANCE**

