

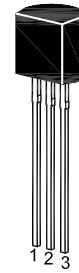
# ST 9018

## NPN Silicon Epitaxial Planar Transistor

for AM/FM amplifier and local oscillator of FM/VHF tuner applications.

The transistor is subdivided into six groups, D, E, F, G, H and I, according to its DC current gain.

On special request, these transistors can be manufactured in different pin configurations.



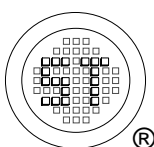
1. Emitter 2. Base 3. Collector  
TO-92 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	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
Power Dissipation	$P_{tot}$	400	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at $V_{CE} = 5\text{ V}$ , $I_C = 1\text{ mA}$ Current Gain Group	D	$h_{FE}$	28	-	45	-
	E	$h_{FE}$	39	-	60	-
	F	$h_{FE}$	54	-	80	-
	G	$h_{FE}$	72	-	108	-
	H	$h_{FE}$	97	-	146	-
	I	$h_{FE}$	132	-	198	-
Collector Cutoff Current at $V_{CB} = 12\text{ V}$	$I_{CBO}$	-	-	50	nA	
Collector Base Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$	$V_{(BR)CBO}$	30	-	-	V	
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	$V_{(BR)CEO}$	15	-	-	V	
Emitter Base Breakdown Voltage at $I_E = 100\text{ }\mu\text{A}$	$V_{(BR)EBO}$	5	-	-	V	
Collector Emitter Saturation Voltage at $I_C = 10\text{ mA}$ , $I_B = 1\text{ mA}$	$V_{CE(sat)}$	-	-	0.5	V	
Collector Base Capacitance at $V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$	$C_{cbo}$	-	1.3	1.7	pF	
Gain Bandwidth Product at $V_{CE} = 5\text{ V}$ , $I_C = 5\text{ mA}$	$f_T$	700	1100	-	MHz	

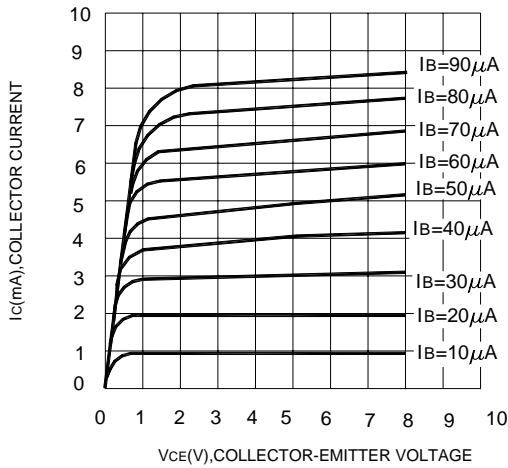


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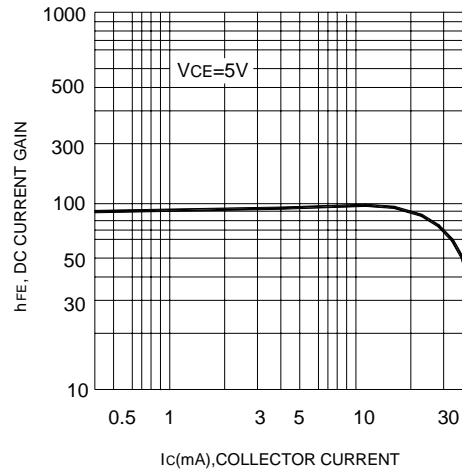


Dated : 23/12/2005

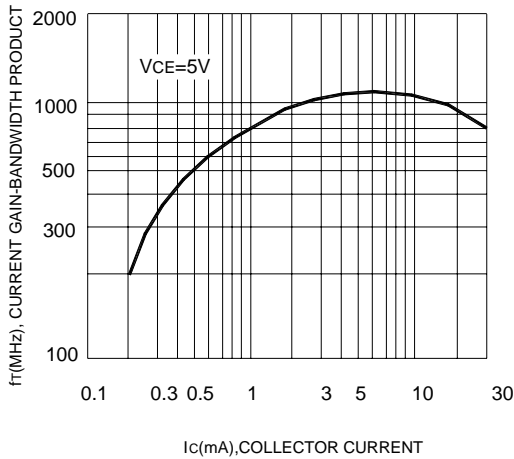
STATIC CHARACTERISTIC



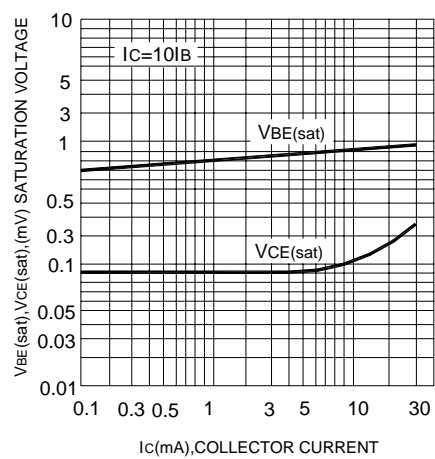
DC CURRENT GAIN



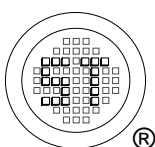
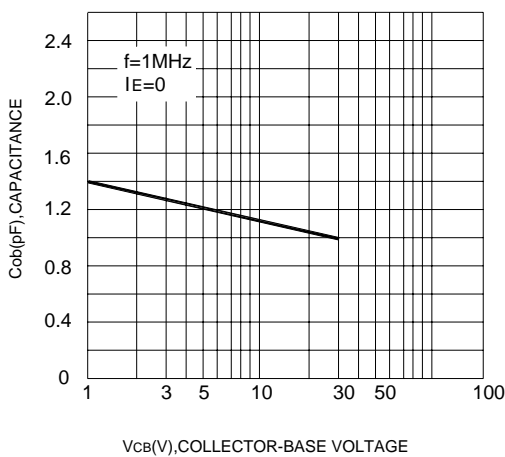
CURRENT GAIN-BANDWIDTH PRODUCT



BASE-EMITTER SATURATION VOLTAGE  
COLLECTOR-EMITTER SATURATION VOLTAGE



OUTPUT CAPACITANCE



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