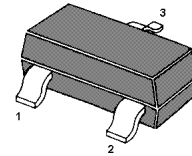


# MMBT9018

## NPN Silicon Epitaxial Planar Transistor

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



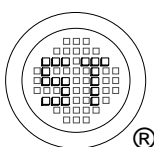
1. Base 2. Emitter 3. Collector  
SOT-23 Plastic Package

### 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	$P_{tot}$	200	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

### Electrical 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 G H	$h_{FE}$	72	-	108	-
		$h_{FE}$	97	-	190	-
Collector Base 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 $V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$	$C_{ob}$	-	1.3	1.7	pF	
Gain Bandwidth Product at $V_{CE} = 5\text{ V}$ , $I_C = 5\text{ mA}$	$f_T$	700	1100	-	MHz	

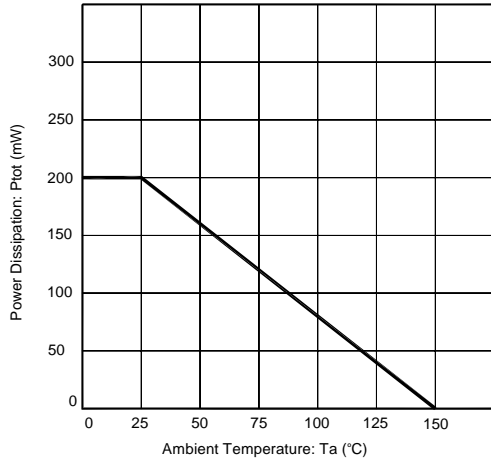


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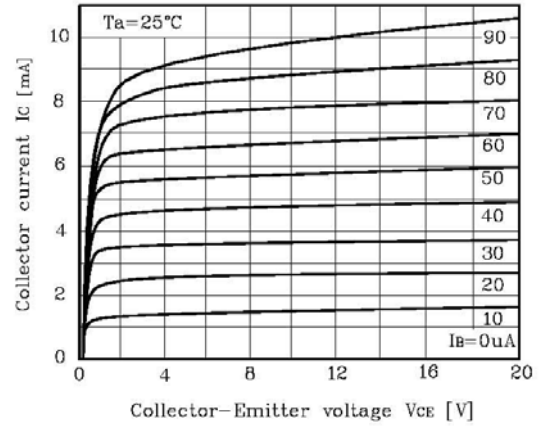


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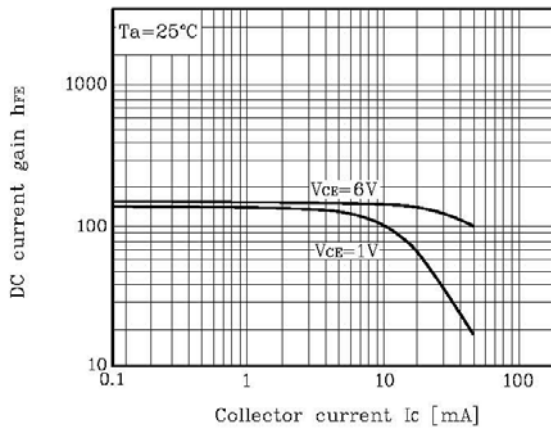
Pc-Ta



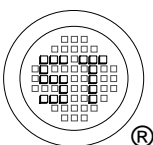
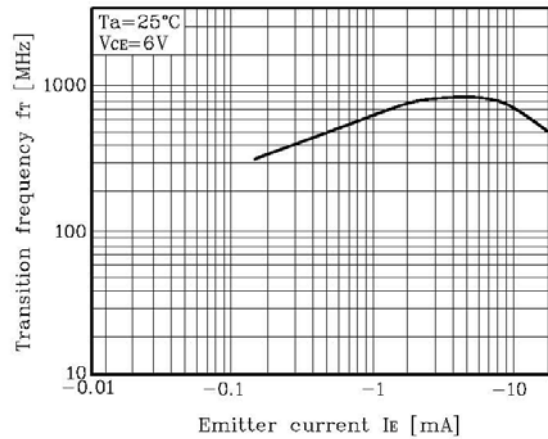
Ic - Vce



hFE - Ic



fT - IE



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