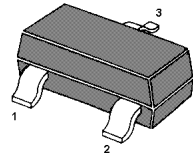


MMBT9018

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

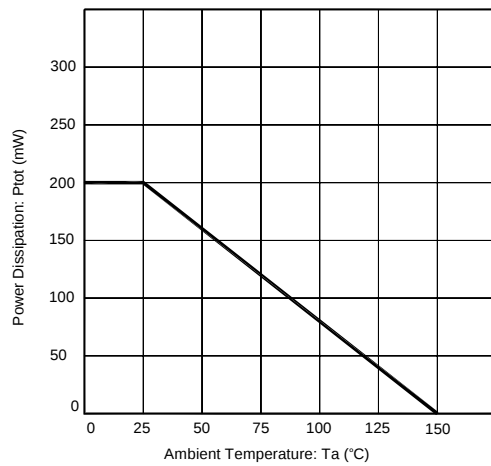
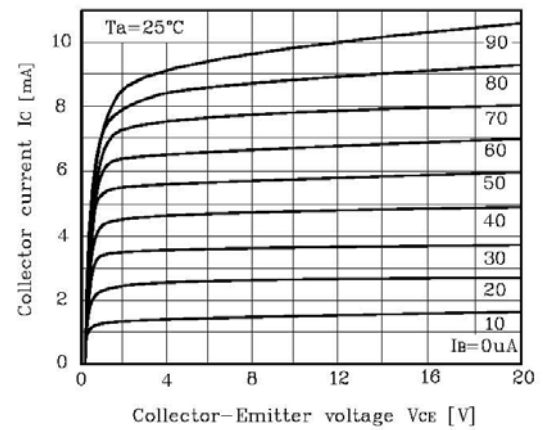
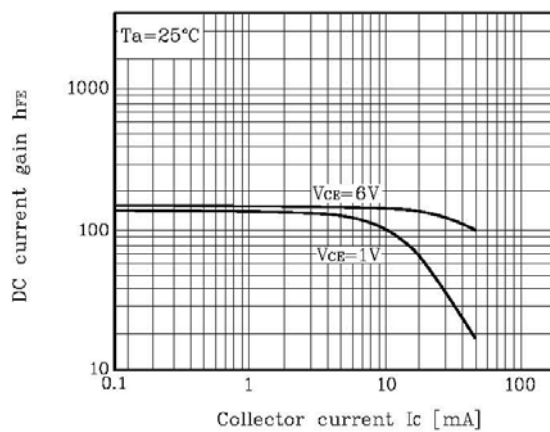
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

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 $T_a = 25^\circ\text{C}$

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

Pc-Ta

 $I_C - V_{CE}$ 
$$h_{FE} - I_C$$

$$\mathbf{f}_T - \mathbf{I}_E$$
