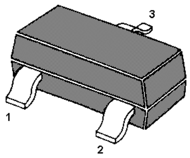
MMBTSC1009

NPN Silicon Epitaxial Transistor

FM/AM RF AMPLIFIER, MIXER, OSCILLATOR, CONVERTER.



1. Base 2. Emitter 3. Collector

SOT-23 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	50	V
Collector Emitter Voltage	V_{CEO}	30	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	50	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	125	°C
Storage Temperature Range	T_{stg}	- 55 to + 125	°C

Characteristics at $T_a = 25\ ^\circ C$

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 6$ V, $I_C = 1$ mA Current Gain Group O Y	h_{FE} h_{FE}	60 90	- -	120 180	- -
Collector Base Cutoff Current at $V_{CB} = 50$ V	I_{CBO}	-	-	100	nA
Emitter Base Cutoff Current at $V_{EB} = 5$ V	I_{EBO}	-	-	100	nA
Collector Emitter Saturation Voltage at $I_C = 10$ mA, $I_B = 1$ mA	$V_{CE(sat)}$	-	-	0.3	V
Base Emitter Voltage at $V_{CE} = 6$ V, $I_C = 1$ mA	V_{BE}	0.65	-	0.75	V
Gain Bandwidth Product at $V_{CE} = 6$ V, $-I_E = 1$ mA	f_T	-	250	-	MHz
Output Capacitance at $V_{CB} = 6$ V, f = 1 MHz	C_{ob}	-	-	2.2	pF