

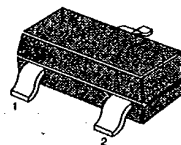
MMBC1009F3**NPN EPITAXIAL SILICON TRANSISTOR**

T-31-19

AM/FM RF AMPLIFIER TRANSISTOR**ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)**

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	25	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	50	mA
Collector Dissipation	P_C	350	mW
Storage Temperature	T_{stg}	150	$^\circ\text{C}$

SOT-23



1. Base 2. Emitter 3. Collector

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

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 15\text{V}, I_E = 0$			100	nA
DC Current Gain	h_{FE}	$V_{CE} = 3\text{V}, I_C = 0.5\text{mA}$	60		120	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 10\text{mA}, I_B = 1.0\text{mA}$			0.3	V
Current Gain-Bandwidth Product	f_T	$I_C = 1\text{mA}, V_{CE} = 6\text{V}$ $f = 100\text{MHz}$	150			MHz
Output Capacitance	C_{ob}	$V_{CB} = 6\text{V}, I_E = 0$ $f = 1\text{MHz}$		2		pF
Noise Figure	NF	$I_C = 0.5\text{mA}, V_{CE} = 6\text{V}$ $f = 1\text{MHz}, R_g = 500\Omega$		2.5		dB

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Marking