

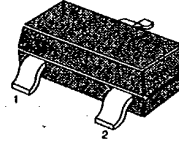
MMBC1009F3**NPN EPITAXIAL SILICON TRANSISTOR**

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_{CB0}	50	V
Collector-Emitter Voltage	V_{CE0}	25	V
Emitter-Base Voltage	V_{EB0}	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_{CB0}	$V_{CB}=15\text{V}, I_E=0$			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

3

Marking