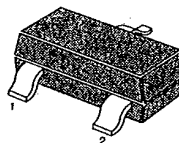


MMBR5179**NPN EPITAXIAL SILICON TRANSISTOR****RF AMPLIFIER TRANSISTOR****ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)**

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	20	V
Collector-Emitter Voltage	V_{CE0}	12	V
Emitter-Base Voltage	V_{EB0}	2.5	V
Collector Current	I_C	50	mA
Collector Dissipation ($T_a = 25^\circ\text{C}$)	P_C	350	mW
Derate above 25°C		2.8	mW/ $^\circ\text{C}$
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	$-55 \sim 150$	$^\circ\text{C}$

SOT-23



1. Base 2. Emitter 3. Collector

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

Characteristic	Symbol	Test Condition	Min	Max	Unit
Collector-Base Breakdown Voltage	BV_{CB0}	$I_C = 0.01\text{mA}$, $I_E = 0$	20		V
Collector-Emitter Breakdown Voltage	BV_{CE0}	$I_C = 3\text{mA}$, $I_B = 0$	12		V
Emitter-Base Breakdown Voltage	BV_{EB0}	$I_E = 0.01\text{mA}$, $I_C = 0$	2.5		V
Collector Cutoff Current	I_{CB0}	$V_{CB} = 15\text{V}$, $I_E = 0$		0.02	μA
DC Current Gain	h_{FE}	$V_{CE} = 1\text{V}$, $I_C = 3\text{mA}$	25		
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 10\text{mA}$, $I_B = 1\text{mA}$		0.4	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 10\text{mA}$, $I_B = 1\text{mA}$		1	V
Current Gain Bandwidth Product	f_T	$V_{CE} = 6\text{V}$, $I_C = 5\text{mA}$, $f = 100\text{MHz}$	900		MHz
Collector Base Capacitance	C_{cb}	$V_{CB} = 10\text{V}$, $I_E = 0$, $f = 0.1\text{MHz to } 1\text{MHz}$		1	pF
Small Signal Current Gain	h_{fe}	$V_{CE} = 6\text{V}$, $I_C = 2\text{mA}$, $f = 1\text{KHz}$	25		
Noise Figure	NF	$V_{CE} = 6\text{V}$, $I_C = 1.5\text{mA}$, $f = 200\text{MHz}$ $R_s = 50\Omega$		4.5	dB
Common Emitter Amplifier Power Gain	G_{pe}	$V_{CE} = 6\text{V}$, $I_C = 5\text{mA}$, $f = 200\text{MHz}$	15		dB

Marking