

**MAXIMUM RATINGS**

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V <sub>CEO</sub>	30	Vdc
Collector-Base Voltage	V <sub>CBO</sub>	30	Vdc
Emitter-Base Voltage	V <sub>EBO</sub>	3.0	Vdc
Collector Current — Continuous	I <sub>C</sub>	30	mAdc

**THERMAL CHARACTERISTICS**

Characteristic	Symbol	Max	Unit
*Total Device Dissipation, T <sub>A</sub> = 25°C Derate above 25°C	P <sub>D</sub>	350 2.8	mW mW/°C
Storage Temperature	T <sub>stg</sub>	150	°C
*Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	357	°C/W

\*Package mounted on 99.5% alumina 10 x 8 x 0.6 mm.

**MMBR4957**

**CASE 318-02/03, STYLE 6**  
**SOT-23 (TO-236AA/AB)**

**RF AMPLIFIER TRANSISTOR**

**PNP SILICON**

**ELECTRICAL CHARACTERISTICS** (T<sub>A</sub> = 25°C unless otherwise noted.)

Characteristic	Symbol	Min	Max	Unit
<b>OFF CHARACTERISTICS</b>				
Collector-Emitter Breakdown Voltage (I <sub>C</sub> = 1.0 mAdc, I <sub>B</sub> = 0)	V <sub>(BR)CEO</sub>	30	—	Vdc
Collector-Base Breakdown Voltage (I <sub>C</sub> = 100 μAdc, I <sub>E</sub> = 0)	V <sub>(BR)CBO</sub>	30	—	Vdc
Emitter-Base Breakdown Voltage (I <sub>E</sub> = 100 μAdc, I <sub>C</sub> = 0)	V <sub>(BR)EBO</sub>	3.0	—	Vdc
Collector Cutoff Current (V <sub>CB</sub> = 10 Vdc, I <sub>C</sub> = 0)	I <sub>CBO</sub>	—	0.1	μAdc
<b>ON CHARACTERISTICS</b>				
DC Current Gain (I <sub>C</sub> = 2.0 mAdc, V <sub>CE</sub> = 10 Vdc)	h <sub>FE</sub>	20	150	—
<b>SMALL-SIGNAL CHARACTERISTICS</b>				
Current-Gain — Bandwidth Product (I <sub>E</sub> = 2.0 mAdc, V <sub>CE</sub> = 10 Vdc, f = 100 MHz)	f <sub>T</sub>	1,200	—	MHz
Collector-Base Capacitance (V <sub>CB</sub> = 10 Vdc, I <sub>E</sub> = 0, f = 1.0 MHz)	C <sub>cb</sub>	—	0.8	pF
Common-Emitter Amplifier Power Gain(1) (V <sub>CE</sub> = 10 Vdc, I <sub>C</sub> = 2.0 mAdc, f = 450 MHz)	G <sub>pe</sub>	17 (Typ)	—	dB
Noise Figure(1) (I <sub>C</sub> = 2.0 mAdc, V <sub>CE</sub> = 10 Vdc, f = 450 MHz)	NF	—	3.0 (Typ)	dB

(1) Noise figure and power gain measured on the Ailtech 7380 50 Ω system.