MXR3866

CASE 345-01, STYLE 1
SOT-89

RF TRANSISTOR

NPN SILICON

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MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	30	V
Collector-Base Voltage	V_{CBO}	55	V
Emitter-Base Voltage	V_{EBO}	3.5	V
Collector Current — Continuous	I_C	0.4	A
Operating and Storage Junction Temperature Range	T_J, T_{stg}	−55 to +150	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
*Total Device Dissipation, T_A = 25°C Derate above 25°C	P_D	1.0 8.0	Watt mW/°C
Storage Temperature	T_{stg}	150	°C
*Thermal Resistance Junction to Ambient	$R_{\theta JA}$	125	°C/W

*Package mounted on 99.5% alumina 10 x 12 x 0.6 mm.

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted.)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage (I_C = 5.0 mA, R_{BE} = 10 Ω)	$V_{(BR)CER}$	55	—	V
Collector-Emitter Sustaining Voltage (I_C = 5.0 mA)	$V_{CEO(sus)}$	30	—	V
Collector-Base Breakdown Voltage (I_C = 0.1 mA)	$V_{(BR)CBO}$	55	—	V
Emitter-Base Breakdown Voltage (I_E = 0.1 mA)	$V_{(BR)EBO}$	3.5	—	V
Collector Cutoff Current (V_{CE} = 28 V)	I_{CEO}	—	20	μA
Collector Cutoff Current (V_{CE} = 55 V, V_{BE} = 1.5 V)	I_{CEX}	—	100	μA
ON CHARACTERISTICS				
DC Current Gain (I_C = 0.36 A, V_{CE} = 5.0 V) (I_C = 0.05 A, V_{CE} = 5.0 V)	h_{FE}	 5.0 10	 — 200	—
Collector-Emitter Saturation Voltage (I_C = 100 mA, I_B = 20 mA)	$V_{CE(sat)}$	—	1.0	V
SMALL-SIGNAL CHARACTERISTICS				
Current-Gain — Bandwidth Product (I_C = 50 mA, V_{CE} = 15 V, f = 200 MHz)	f_T	500	—	MHz
Output Capacitance (V_{CB} = 30 V, f = 1.0 MHz)	C_{obo}	—	3.0	pF