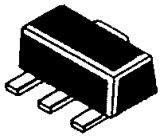
MXR5583

Die Source Same as 2N5583

HIGH FREQUENCY RF TRANSISTOR

PNP SILICON



CASE 345-01, STYLE 1
SOT-89

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	30	V
Collector-Base Voltage	V_{CBO}	30	V
Emitter-Base Voltage	V_{EBO}	3.0	V
Collector Current — Continuous	I_C	500	mA
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(1) (I_C = 10 mA)	$V_{(BR)CEO}$	30	—	V
Collector-Base Breakdown Voltage (I_C = 10 μA)	$V_{(BR)CBO}$	30	—	V
Emitter-Base Breakdown Voltage (I_E = 100 μA)	$V_{(BR)EBO}$	3.0	—	V
Collector Cutoff Current (V_{CB} = 20 V)	I_{CBO}	—	50	nA
Emitter Cutoff Current (V_{EB} = 2.0 V)	I_{EBO}	—	0.5	μA
ON CHARACTERISTICS				
DC Current Gain (1) (I_C = 40 mA, V_{CE} = 2.0 V) (I_C = 100 mA, V_{CE} = 2.0 V) (I_C = 300 mA, V_{CE} = 5.0 V)	h_{FE}	 20 25 15	 — 100 —	—
Collector-Emitter Saturation Voltage (1) (I_C = 100 mA, I_B = 10 mA)	$V_{CE(sat)}$	—	0.8	V
Base-Emitter On Voltage (1) (I_C = 100 mA, V_{CE} = 2.0 V)	$V_{BE(on)}$	—	1.8	V
SMALL-SIGNAL CHARACTERISTICS				
Current-Gain — Bandwidth Product (I_C = 40 mA, V_{CE} = 10 V, f = 100 MHz) (I_C = 100 mA, V_{CE} = 10 V, f = 100 MHz)	f_T	 1000 1300	 — —	MHz

(1) Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 2.0%.