

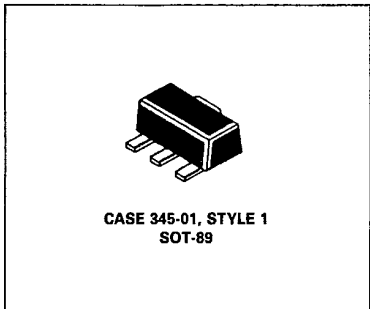
6367254 MOTOROLA SC (XSTRS/R F)

89D 79461 DT-31-23

**MOTOROLA
SEMICONDUCTOR
TECHNICAL DATA**

MXR5943
Die Source Same as 2N5943

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}	40	V
Emitter-Base Voltage	V _{EBO}	3.5	V
Collector Current — Continuous	I _C	400	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 _{θJA}	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)	V _{(BR)CEO}	30	—	V
Collector-Base Breakdown Voltage (I _C = 100 μA)	V _{(BR)CBO}	40	—	V
Emitter-Base Breakdown Voltage (I _E = 100 μA)	V _{(BR)EBO}	3.5	—	V
Collector Cutoff Current (V _{CE} = 20 V)	I _{CEO}	—	50	μA
Collector Cutoff Current (V _{CB} = 15 V)	I _{CBO}	—	10	μA
ON CHARACTERISTICS				
DC Current Gain (I _C = 50 mA, V _{CE} = 15 V)	h _{FE}	25	300	—
Collector-Emitter Saturation Voltage (I _C = 100 mA, I _B = 10 mA)	V _{CE(sat)}	—	0.2	V
Base-Emitter Saturation Voltage (I _C = 100 mA, I _B = 10 mA)	V _{BE(sat)}	—	1.0	V
SMALL SIGNAL CHARACTERISTICS				
Current-Gain — Bandwidth Product (I _C = 25 mA, V _{CE} = 15 V, f = 200 MHz)	f _T	1000	—	MHz
(I _C = 50 mA, V _{CE} = 15 V, f = 200 MHz)		1200	—	
(I _C = 100 mA, V _{CE} = 15 V, f = 200 MHz)		1000	—	