

The RF Line NPN Silicon RF Power Transistors

... designed for 24 volt UHF large-signal, common-emitter amplifier applications in industrial and commercial FM equipment operating in the range of 800–960 MHz.

- Specified 24 Volt, 900 MHz Characteristics
Output Power = 5.0 Watts
Power Gain = 9.0 dB Min
Efficiency = 50% Min
- Series Equivalent Large-Signal Characterization
- Capable of Withstanding 20:1 VSWR Load Mismatch at Rated Output Power and Supply Voltage
- Gold Metallized, Emitter Ballasted for Long Life and Resistance to Metal Migration
- Silicon Nitride Passivated

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CE0}	30	Vdc
Collector-Emitter Voltage	V_{CES}	55	Vdc
Emitter-Base Voltage	V_{EBO}	4.0	Vdc
Collector Current — Continuous	I_C	0.6	Adc
Total Device Dissipation @ $T_A = 50^\circ\text{C}$ (1) Derate above 50°C	P_D	18 0.143	Watts W/ $^\circ\text{C}$
Storage Temperature Range	T_{stg}	-65 to +150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case (2)	$R_{\theta JC}$	7.0	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted.)

Characteristic	Symbol	Min	Typ	Max	Unit
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OFF CHARACTERISTICS

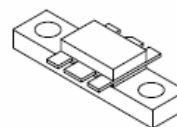
Collector-Emitter Breakdown Voltage ($I_C = 20\text{ mAdc}$, $I_B = 0$)	$V_{(BR)CEO}$	30	—	—	Vdc
Collector-Emitter Breakdown Voltage ($I_C = 20\text{ mAdc}$, $V_{BE} = 0$)	$V_{(BR)CES}$	55	—	—	Vdc
Emitter-Base Breakdown Voltage ($I_E = 0.5\text{ mAdc}$, $I_C = 0$)	$V_{(BR)EBO}$	4.0	—	—	Vdc
Collector Cutoff Current ($V_{CE} = 30\text{ Vdc}$, $V_{BE} = 0$, $T_C = 25^\circ\text{C}$)	I_{CES}	—	—	1.0	mAdc

ON CHARACTERISTICS

DC Current Gain ($I_C = 200\text{ mAdc}$, $V_{CE} = 5.0\text{ Vdc}$)	h_{FE}	30	—	150	—
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MRF891
MRF891S

5.0 W, 900 MHz
RF POWER
TRANSISTORS
NPN SILICON



CASE 319-07, STYLE 2
MRF891



CASE 319A-02, STYLE 2
MRF891S