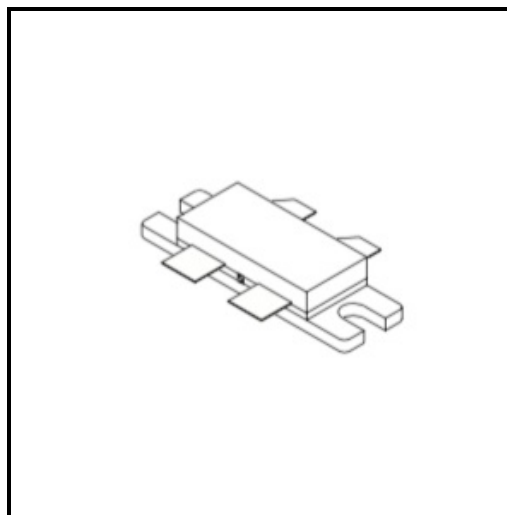


Product Features

The MRF151G is designed for broadband commercial and military applications at frequencies to 175MHz. The high power, high gain, and broadband

performance of this device make possible solid state transmitters for FM broadcast or TV channel frequency bands.

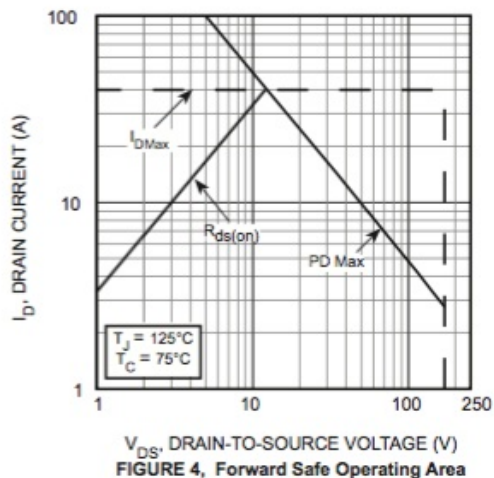
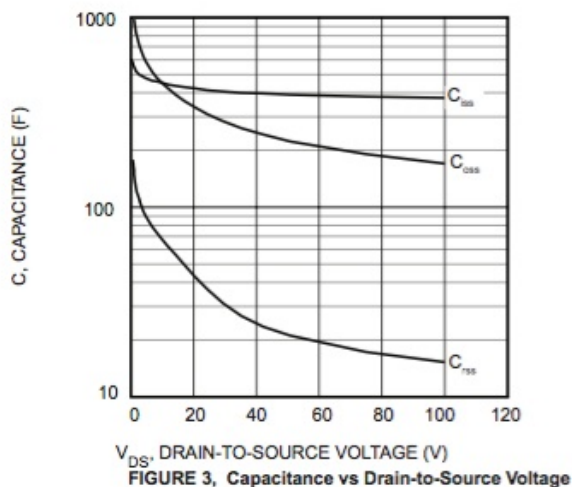
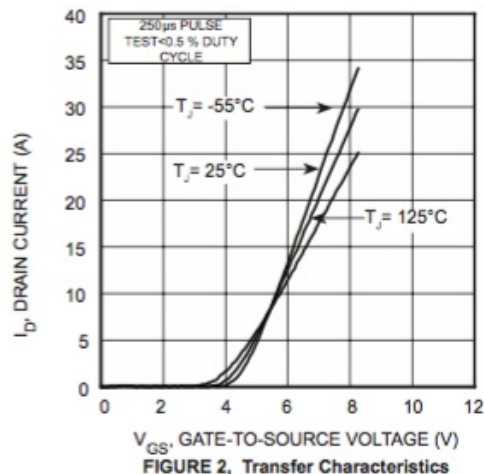
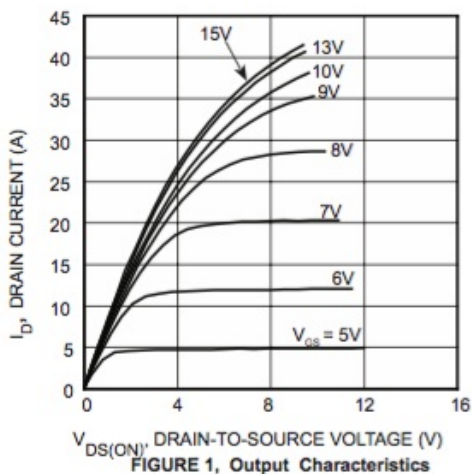


Mechanical And Environmental Specifications:

Parameter	Description	Notes
RoHS Compliance	Yes	

Drawing

Typical Performance Curves



Graph

Dynamic Characteristics

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
C_{iss}	Input Capacitance	$V_{GS} = 0V$ $V_{DS} = 50V$ $f = 1MHz$		383		pF
C_{oss}	Output Capacitance			215		
C_{rss}	Reverse Transfer Capacitance			18		

Functional Characteristics

Symbol	Parameter	Min	Typ	Max	Unit
G_{PS}	$f = 175MHz, V_{DS} = 50V, I_{DQ} = 500mA, P_{out} = 300W$	14	16		dB
η_D	$f = 175MHz, V_{DS} = 50V, I_{DQ} = 500mA, P_{out} = 300W$	50	55		%
ψ	$f = 175MHz, V_{DS} = 50V, I_{DQ} = 500mA, P_{out} = 300W$ 5:1VSWR - All Phase Angles	No Degradation in Output Power			

1. To MIL-STD-1311 Version A, test method 2204B, Two Tone, Reference Each Tone

Maximum Ratings

All Ratings: $T_C = 25^\circ C$ unless otherwise specified

Symbol	Parameter	Unit
V_{DSS}	Drain-Source Voltage	130 V
I_D	Continuous Drain Current @ $T_C = 25^\circ C$	40 A
V_{GS}	Gate-Source Voltage	± 40 V
P_D	Total Device dissipation @ $T_C = 25^\circ C$	500 W
T_{STG}	Storage Temperature Range	-65 to 150 $^\circ C$
T_J	Operating Junction Temperature	200 $^\circ C$

Static Electrical Characteristics

Symbol	Parameter	Min	Typ	Max	Unit
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage ($V_{GS} = 0V, I_D = 100mA$)	130			V
$R_{DS(ON)}$	Drain-Source On-State Resistance ($I_{D(ON)} = 10A, V_{GS} = 10V$)		.13	.20	
I_{DSS}	Zero Gate Voltage Drain Current ($V_{DS} = 50V, V_{GS} = 0V$)			50	μA
I_{GSS}	Gate-Source Leakage Current ($V_{DS} = \pm 20V, V_{GS} = 0V$)			1.0	μA
g_{fs}	Forward Transconductance ($V_{DS} = 10V, I_D = 10A$)	5.0	6.2		mhos
$V_{GS(TH)}$	Gate Threshold Voltage ($V_{DS} = 10V, I_D = 100mA$)	2.9	3.6	4.4	V

Thermal Characteristics

Symbol	Characteristic	Min	Typ	Max	Unit
$R_{\theta JC}$	Junction to Case Thermal Resistance			0.35	$^\circ C/W$



CAUTION: These Devices are Sensitive to Electrostatic Discharge. Proper Handling Procedures Should Be Followed.

Product Notes