

# **MPF102**



# **N-Channel RF Amplifier**

This device is designed for electronic switching Applications such as low ON resistance analog switching. Sourced from Process 50.

Absolute Maximum Ratings \* TA=25 degree C unless otherwise noted

Symbol	Parameter	Value	Units	
V <sub>DG</sub>	Drain-Gate Voltage	25	V	
V <sub>GS</sub>	Gate-Source Voltage	-25	V	
Igf	Forward Gate Current	10	mA	
TJ,Tstg	Operating and Storage Junction Temperature Range -55 to +		degree C	

<sup>\*</sup> This ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

#### NOTES:

- 1) These rating are based on a maximum junction temperature of 150 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

# **Thermal Characteristics** TA = 25 degrees C unless otherwise noted.

Symbol	Characteristic	Max	Units
PD	Total Device Dissipation Derate above 25 degrees C	350 2.8	mW mW/degrees C
Rөлс	Thermal Resistance, Junction to Case	125	degrees C/W
RөJA	Thermal Resistance, Junction to Ambient	357	degrees C/W

<sup>\*</sup> Device mounted on FR-4 PCB 1.5" X 1.6" X 0.06"

# N-Channel RF Amplifier (Continued)

Electrical Characteristics TA= 25 degrees C unless otherwise noted						
Symbol	Parameter	Test Conditions	Min	Тур	Max	Units
OFF CHARACTERISTICS						
V(BR)GSS	Gate-Source Breakdown Voltage	Ig=-1.0μA, Vps=0	-25			V
Igss	Gate Reverse Current			nA		
VGS(off)	Gate-Source Cutoff Voltage	VDS=15V, ID=2nA			-8.0	V
Vgs	Gate-Source Voltage	Vps=15V, ID=200μA	-0.5		-7.5	V
ON CHARACTERISTICS						
IDSS	Zero-Gate Voltage Drain Current	Vps=15V,Vgs=0	2.0		20	mA
gfs	Forward Transconductance	VGS= 0V,VDS=15V,f=1kHz.	2000		7500	μS
Capacitance						
Ciss	Common-Source Input Capacitance	Vgs=15V,Vps=0V f=1 MHz.			7.0	pf
Crss	Common-Source reverse Transfer Capacitance	Vgs=15V,Vps=0V f=1 MHz.			3.0	pf

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