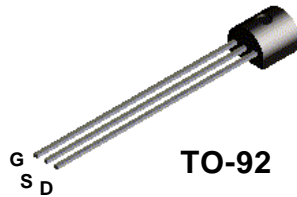


## MPF102



### 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
I <sub>GF</sub>	Forward Gate Current	10	mA
T <sub>J</sub> , T <sub>stg</sub>	Operating and Storage Junction Temperature Range	-55 to + 155	degree C

\* 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
P <sub>D</sub>	Total Device Dissipation Derate above 25 degrees C	350 2.8	mW mW/degrees C
R <sub>θJC</sub>	Thermal Resistance, Junction to Case	125	degrees C/W
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient	357	degrees C/W

\* 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	Typ	Max	Units
OFF CHARACTERISTICS						
V <sub>(BR)GSS</sub>	Gate-Source Breakdown Voltage	I <sub>G</sub> =-1.0μA, V <sub>DS</sub> =0	-25			V
I <sub>GSS</sub>	Gate Reverse Current	V <sub>GS</sub> =-15V, V <sub>DS</sub> =0			-2.0	nA
V <sub>GS(off)</sub>	Gate-Source Cutoff Voltage	V <sub>DS</sub> =15V, I <sub>D</sub> =2nA			-8.0	V
V <sub>GS</sub>	Gate-Source Voltage	V <sub>DS</sub> =15V, I <sub>D</sub> =200μA	-0.5		-7.5	V
ON CHARACTERISTICS						
I <sub>DSS</sub>	Zero-Gate Voltage Drain Current	V <sub>DS</sub> =15V, V <sub>GS</sub> =0	2.0		20	mA
g <sub>fs</sub>	Forward Transconductance	V <sub>GS</sub> = 0V, V <sub>DS</sub> =15V, f=1kHz.	2000		7500	μS
Capacitance						
C <sub>iss</sub>	Common-Source Input Capacitance	V <sub>GS</sub> =15V, V <sub>DS</sub> =0V f=1 MHz.			7.0	pf
C <sub>rss</sub>	Common-Source reverse Transfer Capacitance	V <sub>GS</sub> =15V, V <sub>DS</sub> =0V f=1 MHz.			3.0	pf

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