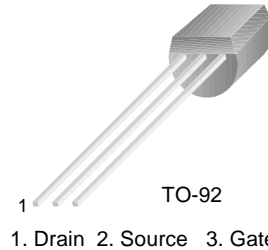


# MPF102

## 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 \* $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{DG}$	Drain-Gate Voltage	25	V
$V_{GS}$	Gate-Source Voltage	-25	V
$I_{GF}$	Forward Gate Current	10	mA
$T_J, T_{STG}$	Operating and Storage Junction Temperature Range	- 55 ~ +155	$^\circ\text{C}$

\* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired

### NOTES:

- 1) These ratings 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

## Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

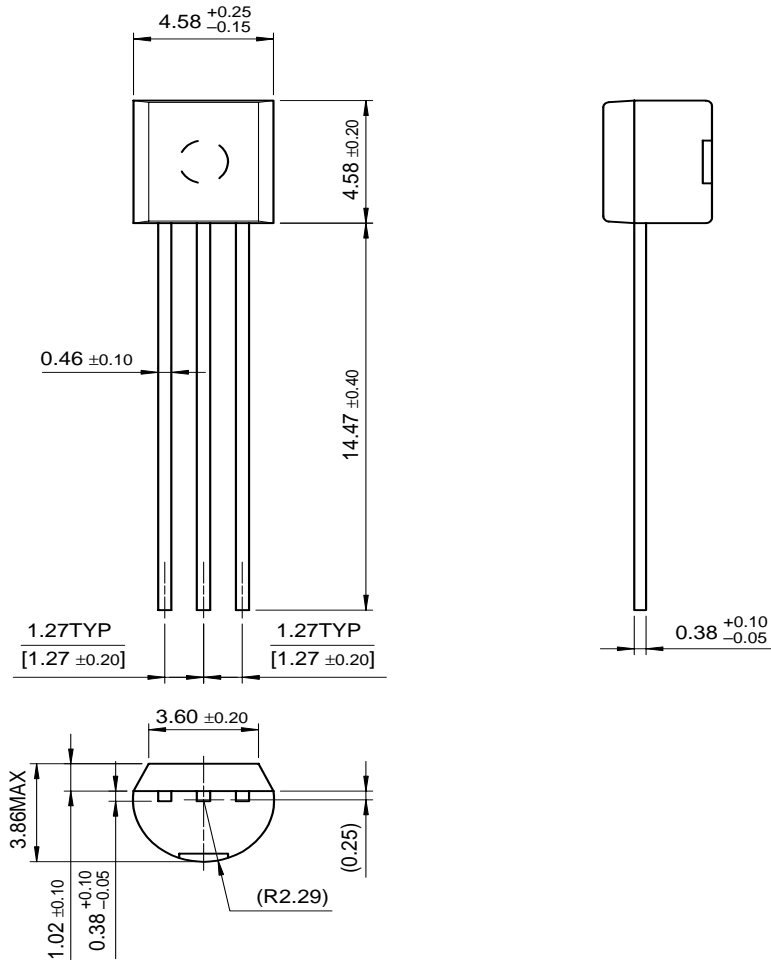
Symbol	Parameter	Test Condition	Min.	Max.	Units
<b>Off Characteristics</b>					
$V_{(BR)GSS}$	Gate-Source Breakdown Voltage	$I_G = -1.0\mu\text{A}, V_{DS} = 0$	-25		V
$I_{GSS}$	Gate Reverse Current	$V_{GS} = -15\text{V}, V_{DS} = 0$		-2.0	nA
$V_{gs(off)}$	Gate-Source Cutoff Voltage	$V_{DS} = 15\text{V}, I_D = 2\text{nA}$		-8.0	V
$V_{gs}$	Gate-Source Voltage	$V_{DS} = 15\text{V}, I_D = 200\mu\text{A}$	-0.5	-7.5	V
<b>On Characteristics *</b>					
$I_{DSS}$	Zero-Gate Voltage Drain Current	$V_{DS} = 15\text{V}, V_{GS} = 0$	2.0	20	mA
$g_{fs}$	Forward Transconductance	$V_{GS} = 0\text{V}, V_{DS} = 15\text{V}, f = 1\text{kHz}$	2000	7500	$\mu\text{S}$
<b>Small Signal Characteristics</b>					
$C_{iss}$	Common-Source Input Capacitance	$V_{GS} = 0, V_{DS} = 15\text{V}, f = 1\text{MHz}$		7.0	pF
$C_{rss}$	Common-Source Reverse Transfer Capacitance	$V_{GS} = 0, V_{DS} = 15\text{V}, f = 1\text{MHz}$		3.0	pF

## Thermal Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Max.	Units
$P_D$	Total Device Dissipation Derate above $25^\circ\text{C}$	350 2.8	mW mW/ $^\circ\text{C}$
$R_{\theta JC}$	Thermal Resistance, Junction to Case	125	$^\circ\text{C/W}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	$^\circ\text{C/W}$

# Package Dimensions

## TO-92



Dimensions in Millimeters

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