

MPF102

N-Channel RF Amplifier

- This device is designed for electronic switching applications such as low ON resistance analog switching.
- Sourced from process 50.



1. Drain 2. Source 3. Gate

Absolute Maximum Ratings * T_a=25°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	°C

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

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

Electrical Characteristics T_a=25°C unless otherwise noted

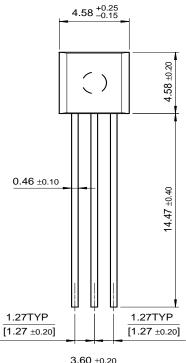
Symbol	Parameter	Test Condition	Min.	Max.	Units	
Off Charact	Off Characteristics					
V _{(BR)GSS}	Gate-Source Breakdown Voltage	$I_G = -1.0 \mu A, V_{DS} = 0$	-25		V	
I _{GSS}	Gate Reverse Current	$V_{GS} = -15V, V_{DS} = 0$		-2.0	nA	
V _{gs(off)}	Gate-Source Cutoff Voltage	$V_{DS} = 15V, I_{D} = 2nA$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

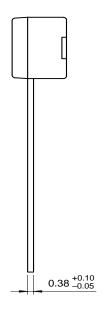
Thermal Characteristics T_a=25°C unless otherwise noted

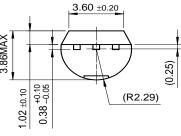
Symbol	Parameter	Max.	Units
P _D	Total Device Dissipation	350	mW
	Derate above 25°C	2.8	mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to Case 125 °C/		°C/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	°C/W

Package Dimensions

TO-92







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