

# 2N5397, 2N5398

## N-Channel Silicon Junction Field-Effect Transistor

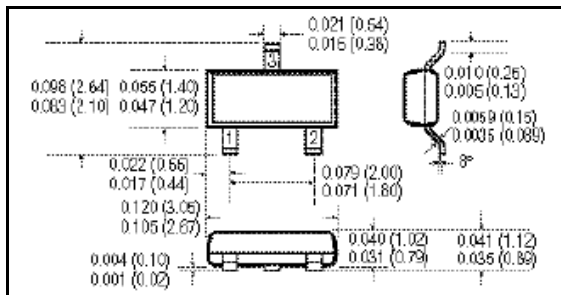
- VHF Amplifiers
- Oscillators
- Mixers
- Low-Noise, High Power Gain
- High Transconductance

**Absolute maximum ratings at  $T_A = 25^\circ\text{C}$**   
 Reverse Gate Source & Gate Drain Voltage -25V  
 Continuous Forward Gate Current 10 mA  
 Continuous Device Power Dissipation 300 mW  
 Power Derating 1.7 mW/ $^\circ\text{C}$   
 Operating Temperature Range  $-55^\circ\text{C}$  to  $+125^\circ\text{C}$   
 Storage Temperature Range  $-65^\circ\text{C}$  to  $+150^\circ\text{C}$

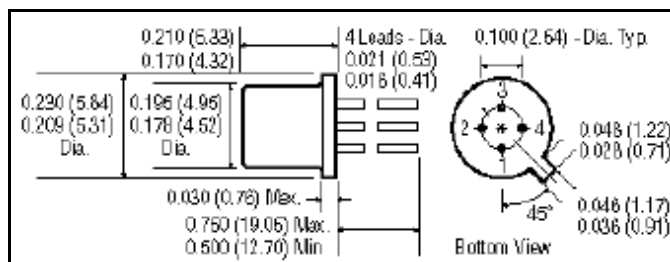
At $25^\circ\text{C}$ free air temperature Static Electrical Characteristics		2N5397		2N5398		Process NJ26L		
		Min	Max	Min	Max	Unit	Test Conditions	
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	-25		-25		V	$I_G = -1 \mu\text{A}$ , $V_{DS} = 0 \text{ V}$	
Gate Reverse Current	$I_{GSS}$		-0.1 -0.1		-0.1 -0.1	nA uA	$V_{GS} = -15 \text{ V}$ , $V_{DS} = 0 \text{ V}$	$150^\circ\text{C}$
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	-1	-6	-1	-6	V	$V_{DS} = 10 \text{ V}$ , $I_D = 1 \text{ nA}$	
Gate Source Forward Voltage	$V_{GS(F)}$		1		1	V	$V_{DS} = 0 \text{ V}$ , $I_G = 1 \text{ mA}$	
Drain Saturation Current (pulsed)	$I_{DSS}$	10	30	5	40	mA	$V_{DS} = 10 \text{ V}$ , $V_{GS} = 0 \text{ V}$	

### Dynamic Electrical Characteristics

Common-Source Forward Transconductance	$g_{fs}$	5.5	9	5	10	mS	$V_{DG} = 10 \text{ V}$ , $I_D = 10 \text{ mA}$	$f = 450 \text{ MHz}$
Common-Source Forward Transfer Admittance	$ Y_{fs} $	6	10	5.5	10	mS	$V_{DS} = 10 \text{ V}$ , $I_D = 10 \text{ mA}$	$f = 1 \text{ kHz}$
Common-Source Output Conductance	$ g_{os} $		0.4		0.5	mS	$V_{DG} = 10 \text{ V}$ , $I_D = 10 \text{ mA}$	$f = 450 \text{ MHz}$
Common-Source Input Admittance	$ Y_{is} $		0.2		0.4	mS	$V_{DS} = 10 \text{ V}$ , $I_D = 10 \text{ mA}$	$f = 1 \text{ kHz}$
Common-Source Input Conductance	$g_{is}$		2		3	mS	$V_{DG} = 10 \text{ V}$ , $I_D = 10 \text{ mA}$	$f = 450 \text{ MHz}$
Common-Source Input Capacitance	$C_{iss}$		5		5.5	pF	$V_{DG} = 15 \text{ V}$ , $V_{GS} = 0 \text{ V}$	$f = 1 \text{ MHz}$
Common-Source Reverse Transfer Capacitance	$C_{rss}$		1.2		1.3	pF	$V_{DG} = 15 \text{ V}$ , $V_{GS} = 0 \text{ V}$	$f = 1 \text{ MHz}$



**SOT-23: SMP5397, SMP5398**  
1-Source, 2-Drain, 3-Gate



**TO-72: 2N5397, 2N5398**  
1-Source, 2-Drain, 3-Gate, 4- Case

Dimensions in Inches (mm)



715 N. Glenville Dr., Ste. 400  
 Richardson, TX 75081  
 (972) 238-9700 Fax (972) 238-5338  
[www.interfet.com](http://www.interfet.com)

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[InterFET:](#)

[2N5398](#) [2N5397](#)