2N5397, 2N5398

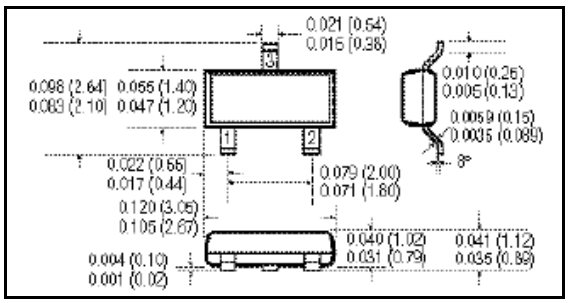
N-Channel Silicon Junction Field-Effect Transistor

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

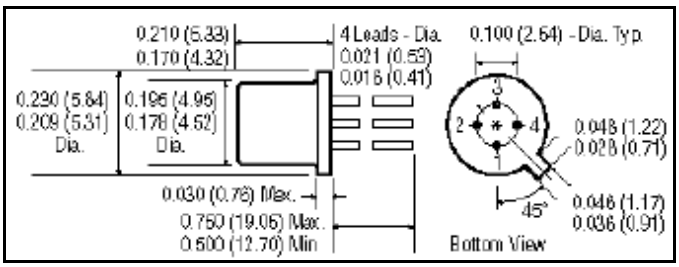
Absolute maximum ratings at $T_A = 25^oC$

Reverse Gate Source & Gate Drain Voltage	-25V
Continuous Forward Gate Current	10 mA
Continuous Device Power Dissipation	300 mW
Power Derating	1.7 mW/°C
Operating Temperature Range	-55°C to +125°C
Storage Temperature Range	-65°C to +150°C

At 25°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 uA, V_{DS} = 0 V	
Gate Reverse Current	I_{GSS}		-0.1 -0.1		-0.1 -0.1	nA uA	V_{GS} = -15 V, V_{DS} = 0 V	150°C
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	-1	-6	-1	-6	V	V_{DS} = 10 V, I_D = 1 nA	
Gate Source Forward Voltage	$V_{GS(F)}$		1		1	V	V_{DS} = 0 V, I_G = 1 mA	
Drain Saturation Current (pulsed)	I_{DSS}	10	30	5	40	mA	V_{DS} = 10 V, V_{GS} = 0 V	
Dynamic Electrical Characteristics								
Common-Source Forward Transconductance	g_{fs}	5.5	9	5	10	mS	V_{DG} = 10 V, I_D = 10 mA	f = 450 MHz
Common-Source Forward Transfer Admittance	$\lvert Y_{fs} \rvert$	6	10	5.5	10	mS	V_{DS} = 10 V, I_D = 10 mA	f = 1 kHz
Common-Source Output Conductance	$\lvert g_{os} \rvert$		0.4		0.5	mS	V_{DG} = 10 V, I_D = 10 mA	f = 450 MHz
Common-Source Input Admitance	$\lvert Y_{is} \rvert$		0.2		0.4	mS	V_{DS} = 10 V, I_D = 10 mA	f = 1 kHz
Common-Source Input Conductance	g_{is}		2		3	mS	V_{DG} = 10 V, I_D = 10 mA	f = 450 MHz
Common-Source Input Capacitance	C_{iss}		5		5.5	pF	V_{DG} = 15 V, V_{GS} = 0 V	f = 1 MHz
Common-Source Reverse Transfer Capacitance	C_{rss}		1.2		1.3	pF	V_{DG} = 15 V, V_{GS} = 0 V	f = 1 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)

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