New Jersey Semi-Conductor Products, Inc.

20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

TELEPHONE: (973) 376-2922
(212) 227-6005
FAX: (973) 376-8960

2N6550

N-Channel Silicon Junction Field-Effect Transistor

Low-Noise, High Gain Amplifier

Absolute maximum ratings at T_A =25°C

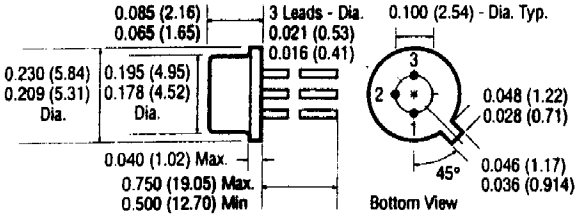
Reverse Gate Source & Reverse Gate Drain Voltage	– 20 V
Continuous Forward Gate Current	50 mA
Continuous Device Power Dissipation	400 mW
Power Derating	2.3 mW/°C
Junction Temperature (Operating & Storage)	– 65°C to +200°C

At 25°C free air temperature:

Static Electrical Characteristics		2N6550					
		Min	Typ	Max	Unit	Test Conditions	
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	– 20			V	I_G = 10 µA, V_{DS} = ØV	
Gate Leakage Current	I_{GSS}			– 3	nA	V_{GS} = – 10V, V_{DS} = ØV	
				– 0.1	µA	V_{GS} = – 10V, V_{DS} = ØV	T_A = 85°C
Zero Gate Voltage Drain Current (Pulsed)	I_{DSS}	10	100	250	mA	V_{DS} = 10V, V_{GS} = Ø V	
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	– 0.3		– 3	V	V_{DS} = 10V, I_D = 0.1 mA	

Dynamic Electrical Characteristics

Transconductance	g_{fs}	25		150	mS	V_{DS} = 10V, I_D = 10 mA	f = 1 kHz
Common Source Output Conductance	$\|Y_{os}\|$			150	µS	V_{DS} = 10V, I_D = 10 mA	f = 1 kHz
Common Source Input Capacitance	C_{iss}		30	35	pF	V_{DS} = 10V, I_D = 10 mA	f = 140 kHz
Common Source Reverse Transfer Capacitance	C_{rss}		10	20	pF	V_{DS} = 10V, V_{DS} = ØV	f = 140 kHz
Equivalent Short Circuit Input Noise Voltage	$\bar{e}_N$		1.4	2	nV/√Hz	V_{DS} = 5V, I_D = 10 mA	f = 1 kHz
			6	10	nV/√Hz	V_{DS} = 5V, I_D = 10 mA	f = 10 Hz
	$\bar{e}_N$ Total		0.4	0.6	µVrms	V_{DS} = 5V, I_D = 10 mA	f = 10 kHz to 20 kHz
Equivalent Open Circuit Input Noise Current	$\bar{i}_N$		0.1		pA/√Hz	R_S < 100 KΩ	f = 1 kHz



TO-46 Package
Dimensions in Inches (mm)

Pin Configuration
1 Drain, 2 Source, 3 Gate & Case

Quality Semi-Conductors