

2N6449, 2N6450

N-Channel Silicon Junction Field-Effect Transistor

• High Voltage

Absolute maximum ratings at $T_A = 25^\circ\text{C}$

	2N6449	2N6450
Reverse Gate Source Voltage	– 300 V	– 200 V
Reverse Gate Drain Voltage	– 300 V	– 200 V
Continuous Forward Gate Current	10 mA	10 mA
Continuous Device Power Dissipation	800 mW	800 mW
Power Derating	6.4 mW/°C	6.4 mW/°C

At 25°C free air temperature:

Static Electrical Characteristics

		2N6449		2N6450		Process NJ42	
		Min	Max	Min	Max	Unit	Test Conditions
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	– 300		– 200		V	$I_G = -10\text{ }\mu\text{A}$, $V_{DS} = \emptyset\text{V}$
Gate Reverse Current	I_{GSS}		– 100			nA	$V_{GS} = -150\text{V}$, $V_{DS} = \emptyset\text{V}$
					– 100	nA	$V_{GS} = -100\text{V}$, $V_{DS} = \emptyset\text{V}$
			– 100			μA	$V_{GS} = -150\text{V}$, $V_{DS} = \emptyset\text{V}$, $T_A = 150^\circ\text{C}$
					– 100	μA	$V_{GS} = -100\text{V}$, $V_{DS} = \emptyset\text{V}$, $T_A = 150^\circ\text{C}$
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	– 2	– 15	– 2	– 15	V	$V_{DS} = 30\text{V}$, $I_D = 4\text{ nA}$
Drain Saturation Current (Pulsed)	I_{DSS}	2	10	2	10	mA	$V_{DS} = 30\text{V}$, $V_{GS} = \emptyset\text{V}$

Dynamic Electrical Characteristics

Common Source Forward Transfer Admittance	Y_{fs}	0.5	3	0.5	3	mS	$V_{DS} = 30\text{V}$, $V_{GS} = \emptyset\text{V}$	$f = 1\text{ kHz}$
Common Source Output Conductance	Y_{os}		100		100	μS	$V_{DS} = 30\text{V}$, $V_{GS} = \emptyset\text{V}$	$f = 1\text{ kHz}$
Common Source Input Capacitance	C_{iss}		20		20	pF	$V_{DS} = 30\text{V}$, $V_{GS} = \emptyset\text{V}$	$f = 1\text{ MHz}$
Common Source Reverse Transfer Capacitance	C_{rss}		2.5		2.5	pF	$V_{DS} = 30\text{V}$, $V_{GS} = \emptyset\text{V}$	$f = 1\text{ MHz}$

TO-39 Package

Dimensions in Inches (mm)

Pin Configuration

1 Source, 2 Drain, 3 Gate & Case

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