

IFN6449, IFN6450

N-Channel Silicon Junction Field-Effect Transistor

• High Voltage

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

	IFN6449	IFN6450
Reverse Gate Source Voltage	– 100 V	– 100 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

		IFN6449		IFN6450		Process NJ42	
		Min	Max	Min	Max	Unit	Test Conditions
Gate Drain Breakdown Voltage	$V_{(BR)GDO}$	– 300		– 200		V	$I_G = -10\text{ }\mu\text{A}$, $I_S = \emptyset\text{ A}$
Gate Source Breakdown Voltage	$V_{(BR)GSO}$	– 100		– 100		V	$I_G = -10\text{ }\mu\text{A}$, $I_D = \emptyset\text{ A}$
Gate Reverse Current	I_{GSS}				– 100	nA	$V_{GS} = -80\text{ V}$, $V_{DS} = \emptyset\text{ V}$
					– 100	μA	$V_{GS} = -80\text{ V}$, $V_{DS} = \emptyset\text{ V}$ $T_A = 150^\circ\text{C}$
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 Transmittance	$ 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	g_{os}		100		100	μS	$V_{DS} = 30\text{ V}$, $V_{GS} = \emptyset\text{ V}$	$f = 1\text{ kHz}$
Common Source Input Capacitance	C_{iss}		10		10	pF	$V_{DS} = 30\text{ V}$, $V_{GS} = \emptyset\text{ V}$	$f = 1\text{ MHz}$
Common Source Reverse Transfer Capacitance	C_{rss}		5		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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