

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/ $^\circ\text{C}$	6.4 mW/ $^\circ\text{C}$

At 25°C free air temperature:

Static Electrical Characteristics

		IFN6449		IFN6450		Unit	Process NJ42	
		Min	Max	Min	Max		Test Conditions	
Gate Drain Breakdown Voltage	$V_{(BR)GDO}$	- 300		- 200		V	$I_G = - 10 \mu\text{A}$, $I_S = \emptyset\text{A}$	
Gate Source Breakdown Voltage	$V_{(BR)GSO}$	- 100		- 100		V	$I_G = - 10 \mu\text{A}$, $I_D = \emptyset\text{A}$	
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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