

## IFN147

## N-Channel Silicon Junction Field-Effect Transistor

- Low-Noise Audio Amplifier
- Equivalent to Japanese 2SK147

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

Reverse Gate Source & Reverse Gate Drain Voltage	- 40 V
Continuous Forward Gate Current	10 mA
Continuous Device Power Dissipation	300 mW
Power Derating	2.4 mW/°C

At 25°C free air temperature:

## Static Electrical Characteristics

		IFN147			Process NJ450		
		Min	Typ	Max	Unit	Test Conditions	
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	- 40			V	$I_G = -1\ \mu\text{A}$ , $V_{DS} = 0\text{V}$	
Gate Reverse Current	$I_{GSS}$			- 1	nA	$V_{GS} = -30\text{V}$ , $V_{DS} = 0\text{V}$	
				- 1	$\mu\text{A}$	$V_{GS} = -30\text{V}$ , $V_{DS} = 0\text{V}$ , $T_A = 150^\circ\text{C}$	
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	- 0.3		- 1.2	V	$V_{DS} = 10\text{V}$ , $I_D = 1\ \mu\text{A}$	
Drain Saturation Current (Pulsed)	$I_{DSS}$	5		30	mA	$V_{DS} = 10\text{V}$ , $V_{GS} = 0\text{V}$	

## Dynamic Electrical Characteristics

Common Source Forward Transconductance	$g_{fs}$	30	40		mS	$V_{DS} = 10\text{V}$ , $V_{GS} = 0\text{V}$ $I_{DSS} = 5\ \text{mA}$	$f = 1\ \text{kHz}$
Common Source Input Capacitance	$C_{iss}$			75	pF	$V_{DS} = 10\text{V}$ , $V_{GS} = 0\text{V}$	$f = 1\ \text{kHz}$
Common Source Reverse Transfer Capacitance	$C_{rss}$			15	pF	$V_{DS} = 10\text{V}$ , $I_D = 0$	$f = 1\ \text{Hz}$
Noise Figure	NF		1		dB	$V_{DS} = 10\text{V}$ , $I_D = 5\ \text{mA}$	$f = 1\ \text{kHz}$
				10	dB	$R_G = 100\ \Omega$	$f = 100\ \text{Hz}$

## TO-18 Package

Dimensions in Inches (mm)

## Pin Configuration

1 Source, 2 Gate &amp; Case, 3 Drain



1000 N. Shiloh Road, Garland, TX 75042  
(972) 487-1287 FAX (972) 276-3375

[www.interfet.com](http://www.interfet.com)