Japanese Equivalent JFET Types

Silicon Junction Field-Effect Transistors

2SK113	2SK152	2SK363	2SJ44	Japanese	
IFN113	IFN152	IFN363	IFP44	InterFET	
NJ132	NJ132L	NJ450	PJ99	Process	
N Channel	N Channel	N Channel	P Channel	Unit Limit	Parameters
– 50	– 20	– 40	25	V Min	BV_{GSS}
1.0 (–20 V)	0.1 (–10 V)	1.0 (–30 V)	1.0 (10 V)	nA Max	I_{GSS}
– 0.3/–10 (20 V)	– 0.5/– 2.0 (–10 V)	– 0.3/– 1.2 (10 V)	– 0.2/–1.5 (–10 V)	V Min/Max	$V_{GS(off)}$
5.0/150 (20 V)	5.0/20 (10 V)	5.0/30 (10 V)	1.0/18 (–10 V)	mA Min/Max	I_{DSS}
20 (20 V)	30 (10 V)	60 (10 V)	9 (–10 V)	mS Typ	g_{fs}
10 (Ø) (20 V)	15 (Ø) (10 V)	75 (Ø) (10 V)	15 (Ø) (–10 V)	pF Typ	C_{iss}
3.0 (Ø) (15 V)	4.0 (Ø) (10 V)	15 (Ø) (10 V)	3 (Ø) (–10 V)	pF Typ	C_{rss}
TO-18	TO-18	TO-18	TO-18	Package Configuration	
SDG	SDG	DGS	DGS	Pin Configuration	

InterFET Corporation
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(972) 487-1287 FAX (972) 276-3375

www.interfet.com

IFN146

Dual N-Channel Silicon Junction Field-Effect Transistor

- Low-Noise Audio Amplifier
- Equivalent to Japanese 2SK146

Absolute maximum ratings at T_A = 25°C

Reverse Gate Source & Reverse Gate Drain Voltage	– 40 V
Continuous Forward Gate Current	10 mA
Continuous Device Power Dissipation	375 mW
Power Derating	3 mW/°C
Storage Temperature Range	– 65°C to 200°C

At 25°C free air temperature:		IFN146			Process NJ450		
Static Electrical Characteristics		**Min**	**Typ**	**Max**	**Unit**	**Test Conditions**	
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	– 40			V	I_G = – 1 µA, V_{DS} = ØV	
Gate Reverse Current	I_{GSS}			– 1	nA	V_{GS} = – 30V, V_{DS} = ØV	
				– 1	µA	V_{GS} = – 30V, V_{DS} = ØV	T_A = 150°C
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	– 0.3		– 1.2	V	V_{DS} = 10V, I_D = 1 µA	
Drain Saturation Current (Pulsed)	I_{DSS}			30	mA	V_{DS} = 10V, V_{GS} = ØV	
Dynamic Electrical Characteristics							
Common Source Forward Transconductance	g_{fs}	30	40		mS	V_{DS} = 10V, V_{GS} = ØV I_{DSS} = 5 mA	f = 1 kHz
Common Source Input Capacitance	C_{iss}			75	pF	V_{DS} = 10V, V_{GS} = ØV	f = 1 kHz
Common Source Reverse Transfer Capacitance	C_{rss}			15	pF	V_{DS} = 10V, I_D = ØA	f = 1 kHz
Noise Figure	NF		1		dB	V_{DS} = 10V, I_D = 5 mA R_G = 100Ω	f = 1 kHz
Differential Gate Source Voltage	$\lvert V_{GS1} - V_{GS2} \rvert$			20	mV	V_{DS} = 10V, I_D = 5 mA	

TO-71 Package
Dimensions in Inches (mm)

Pin Configuration
1 Source, 2 Gate, 3 Drain,
5 Source, 6 Gate, 7 Drain

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IFN147

N-Channel Silicon Junction Field-Effect Transistor

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

Absolute maximum ratings at T_A = 25°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:		IFN147			Process NJ450		
Static Electrical Characteristics		**Min**	**Typ**	**Max**	**Unit**	**Test Conditions**	
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	– 40			V	I_G = – 1 µA, V_{DS} = ØV	
Gate Reverse Current	I_{GSS}			– 1	nA	V_{GS} = – 30V, V_{DS} = ØV	
				– 1	µA	V_{GS} = – 30V, V_{DS} = ØV	T_A = 150°C
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	– 0.3		– 1.2	V	V_{DS} = 10V, I_D = 1 µA	
Drain Saturation Current (Pulsed)	I_{DSS}	5		30	mA	V_{DS} = 10V, V_{GS} = ØV	
Dynamic Electrical Characteristics							
Common Source Forward Transconductance	g_{fs}	30	40		mS	V_{DS} = 10V, V_{GS} = ØV I_{DSS} = 5 mA	f = 1 kHz
Common Source Input Capacitance	C_{iss}			75	pF	V_{DS} = 10V, V_{GS} = ØV	f = 1 kHz
Common Source Reverse Transfer Capacitance	C_{rss}			15	pF	V_{DS} = 10V, I_D = Ø	f = 1 Hz
Noise Figure	NF		1		dB	V_{DS} = 10V, I_D = 5 mA	f = 1 kHz
				10	dB	R_G = 100Ω	f = 100 Hz

TO-18 Package
Dimensions in Inches (mm)

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

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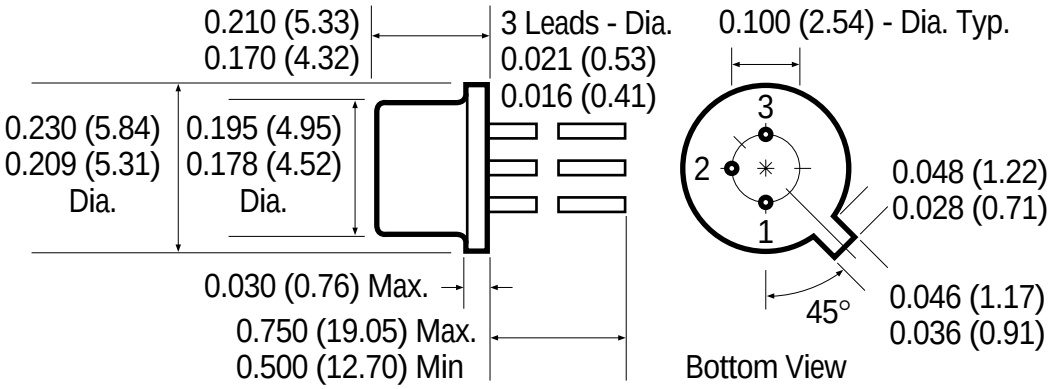
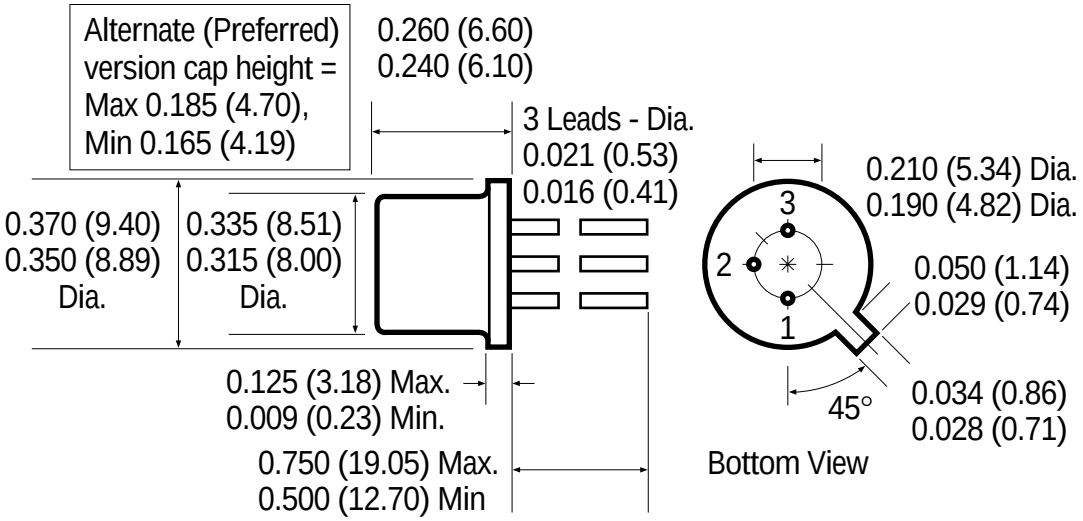
TO-18 Package

Dimensions in Inches (mm)



TO-39 Package

Dimensions in Inches (mm)



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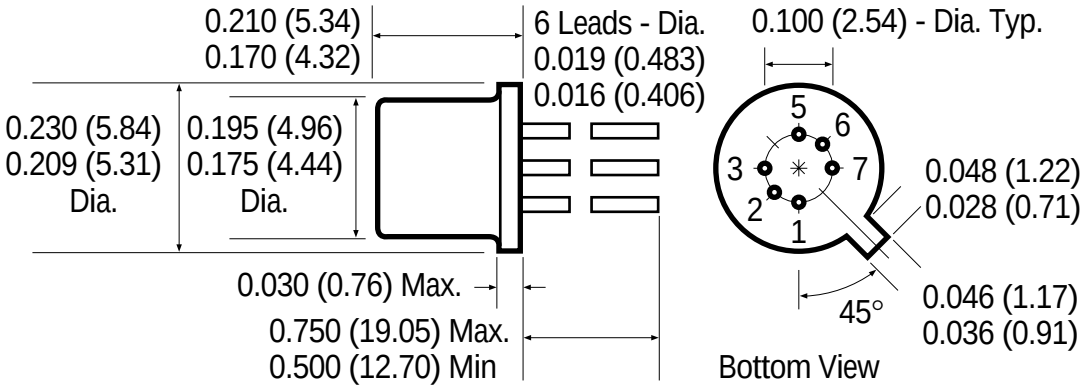
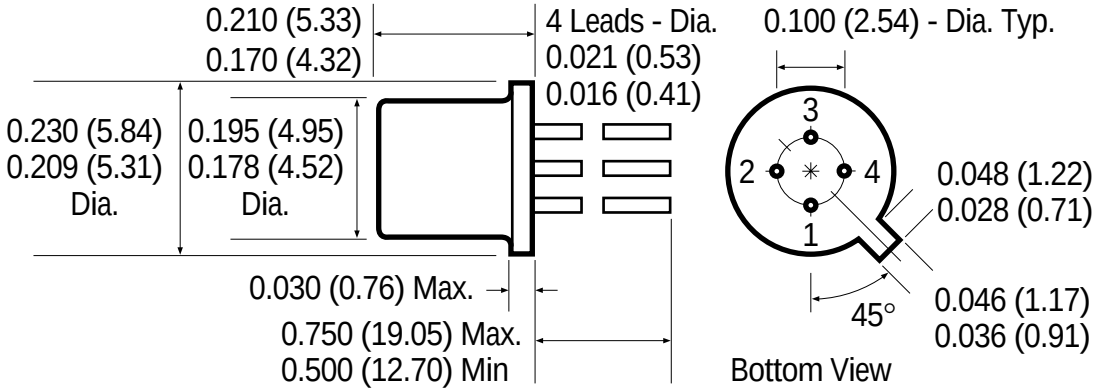
TO-71 Package

Dimensions in Inches (mm)



TO-72 Package

Dimensions in Inches (mm)



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