

PJ99 Process

Silicon Junction Field-Effect Transistor

- General Purpose Amplifier
- Analog Switch

Absolute maximum ratings at TA = 25 °C

Gate Current, Ig	10 mA
Operating Junction Temperature, Tj	+150°C
Storage Temperature, Ts	– 65°C to +175°C

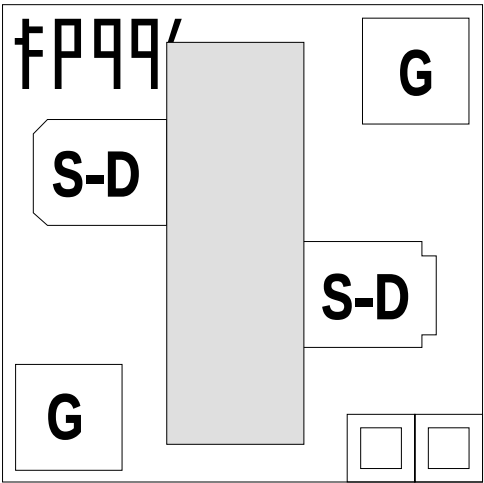
Devices in this Databook based on the PJ99 Process.

Datasheet

2N3993, 2N3993A
2N3994, 2N3994A
2N5114, 2N5115
2N5116
2SJ44
IFN5114, IFN5115
IFN5116

Datasheet

IFP44
J174, J175
J176, J177
P1086, P1087
VCR3P



Die Size = 0.021" X 0.021"
All Bond Pads = 0.004" Sq.
Substrate is also Gate.

www.DataSheet4U.com

At 25°C free air temperature:		PJ99 Process					
		Min	Typ	Max	Unit	Test Conditions	
Gate Source Breakdown Voltage	V _{(BR)GSS}	30	40		V	I _G = 1 μA, V _{DS} = ØV	
Reverse Gate Leakage Current	I _{GSS}		0.5	1	nA	V _{GS} = 20V, V _{DS} = ØV	
Drain Saturation Current (Pulsed)	I _{DSS}	– 5		– 60	mA	V _{DS} = – 15V, V _{GS} = ØV	
Gate Source Cutoff Voltage	V _{GS(OFF)}	1		8	V	V _{DS} = – 15V, I _D = 1 nA	

Dynamic Electrical Characteristics

Drain Source ON Resistance	r _{ds(on)}		75		Ω	I _D = 1 mA, V _{GS} = ØV	f = 1 kHz
Forward Transconductance	g _{fs}		15		mS	V _{DS} = – 15V, V _{GS} = ØV	f = 1 kHz
Input Capacitance	C _{iss}		18		pF	V _{DS} = 15V, V _{GS} = ØV	f = 1 MHz
Feedback Capacitance	C _{iss}		4.5		pF	V _{DS} = ØV, V _{GS} = 10V	f = 1 MHz
Equivalent Noise Voltage	ē _N		8		nV/√HZ	V _{DS} = – 10V, V _{GS} = ØV	f = 1 kHz
Turn On Delay Time	t _{d(on)}		5		ns	V _{DD} = – 10V, I _{D(ON)} = – 15 mA R _L = 580 Ω, V _{GS(ON)} = ØV V _{GS(OFF)} = 12V	
Rise Time	t _r		10		ns		
Turn Off Delay Time	t _{d(off)}		6		ns		
Fall Time	t _f		5		ns		

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