N-Channel JFET
General Purpose Amplifier

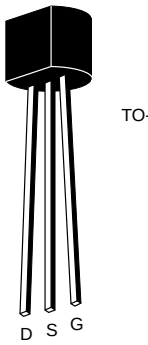
calogic CORPORATION

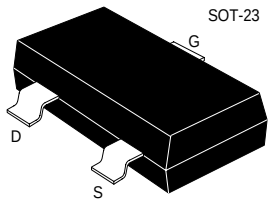
J201 – J204 / SST201 – SST204

FEATURES

- **High Input Impedance**
- **Low I_{GSS}**

PIN CONFIGURATION





PRODUCT MARKING (SOT-23)	
SST201	A01
SST202	A02
SST203	A03
SST204	A04

5010

ABSOLUTE MAXIMUM RATINGS
(T_A = 25°C unless otherwise specified)

Gate-Source or Gate-Drain Voltage . . . . . -40V
Gate Current 50mA
Storage Temperature Range . . . . . -55°C to +150°C
Operating Temperature Range . . . . . -55°C to +135°C
Lead Temperature (Soldering, 10sec) . . . . . +300°C
Power Dissipation 360mW
Derate above 25°C . . . . . 3.3mW/°C

NOTE: Stresses above those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions above those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

ORDERING INFORMATION

Part	Package	Temperature Range
J201-204	Plastic TO-92	-55°C to +135°C
SST201-204	Plastic SOT-23	-55°C to +135°C

For Sorted Chips in Carriers see 2N4338 series.

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

SYMBOL	PARAMETER	201			202			203			204			UNITS	TEST CONDITIONS	
		MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX			
I_{GSS}	Gate Reverse Current (Note 1)			-100			-100			-100			-100	pA	V_{DS} = 0, V_{GS} = -20V	
$V_{GS(off)}$	Gate-Source Cutoff Voltage	-0.3		-1.5	-0.8		-4.0	-2.0		-10.0	-0.3		-2.0	V	VDS = 20V, I_D = 10nA	
BV_{GSS}	Gate-Source Breakdown Voltage	-40			-40			-40			-25				V_{DS} = 0, I_G = -1µA	
I_{DSS}	Saturation Drain Current (Note 2)	0.2		1.0	0.9		4.5	4.0		20	0.2	1.2	3.0	mA	V_{DS} = 20V, V_{GS} = 0	
I_G	Gate Current (Note 1)		-10			-10			-10			-10		pA	V_{DG} = 20V, I_D = $I_{DSS(min)}$	
g_{fs}	Common-Source Forward Transconductance (Note 2)	500			1,000			1,500			500	1,500		µs	V_{DS} = 20V, V_{GS} = 0	f = 1kHz
g_{os}	Common-Source Output Conductance		1			3.5			10			2.5				
C_{iss}	Common-Source Input Capacitance		4			4			4			4		pF		f = 1MHz (Note 3)
C_{rss}	Common-Source Reverse Transfer Capacitance		1			1			1			1				
$\overline{e}_n$	Equivalent Short-Circuit Input Noise Voltage		5			5			5			10		$\frac{nV}{\sqrt{Hz}}$	V_{DS} = 10V, V_{GS} = 0	f = 1kHz (Note 3)

NOTES: **1.** Approximately doubles for every 10°C increase in T_A.
2. Pulse test duration = 2ms.
3. For design reference only, not 100% tested.