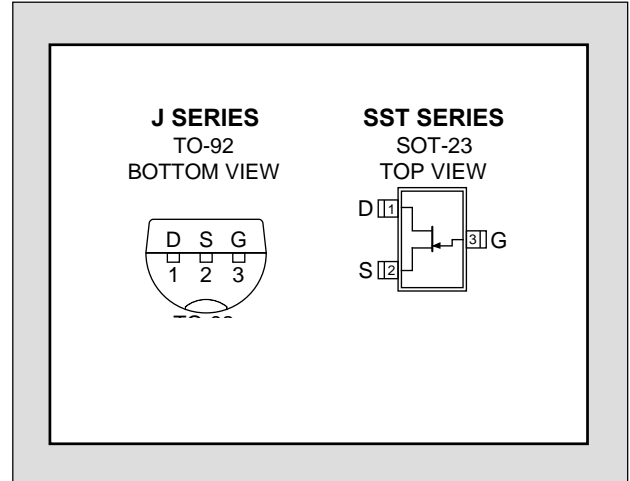


J/SST111 SERIES

SINGLE N-CHANNEL JFET

| FEATURES | |
|--|--------------|
| DIRECT REPLACEMENT FOR SILICONIX J/SST111 SERIES | |
| LOW GATE LEAKAGE CURRENT | 5pA |
| FAST SWITCHING | 4ns |
| ABSOLUTE MAXIMUM RATINGS¹ @ 25 °C (unless otherwise stated) | |
| Maximum Temperatures | |
| Storage Temperature | -55 to 150°C |
| Junction Operating Temperature | -55 to 135°C |
| Maximum Power Dissipation | |
| Continuous Power Dissipation (J) | 360mW |
| Continuous Power Dissipation (SST) | 350mW |
| Maximum Currents | |
| Gate Current | 50mA |
| Maximum Voltages | |
| Gate to Drain | -35V |
| Gate to Source | -35V |



STATIC ELECTRICAL CHARACTERISTICS @25 °C (unless otherwise stated)

| SYM. | CHARACTERISTIC | TYP | J/SST111 | | J/SST112 | | J/SST113 | | UNIT | CONDITIONS |
|---------------|---|--------|----------|-----|----------|-----|----------|-----|----------|------------------------------|
| | | | MIN | MAX | MIN | MAX | MIN | MAX | | |
| BV_{GSS} | Gate to Source Breakdown Voltage | | -35 | | -35 | | -35 | | V | $I_G = -1\mu A, V_{DS} = 0V$ |
| $V_{GS(off)}$ | Gate to Source Cutoff Voltage | | -3 | -10 | -1 | -5 | | -3 | | $V_{DS} = 5V, I_D = 1\mu A$ |
| $V_{GS(F)}$ | Gate to Source Forward Voltage | 0.7 | | | | | | | | $I_G = 1mA, V_{DS} = 0V$ |
| I_{DSS} | Drain to Source Saturation Current ² | | 20 | | 5 | | 2 | | mA | $V_{DS} = 15V, V_{GS} = 0V$ |
| I_{GSS} | Gate Leakage Current | -0.005 | | -1 | | -1 | | -1 | nA | $V_{GS} = -15V, V_{DS} = 0V$ |
| I_G | Gate Operating Current | -5 | | | | | | | pA | $V_{DG} = 15V, I_D = 10mA$ |
| $I_{D(off)}$ | Drain Cutoff Current | 0.005 | | 1 | | 1 | | 1 | nA | $V_{DS} = 5V, V_{GS} = -10V$ |
| $r_{DS(on)}$ | Drain to Source On Resistance | | | 30 | | 50 | | 100 | Ω | $I_G = 1mA, V_{DS} = 0V$ |

DYNAMIC ELECTRICAL CHARACTERISTICS @25 °C (unless otherwise stated)

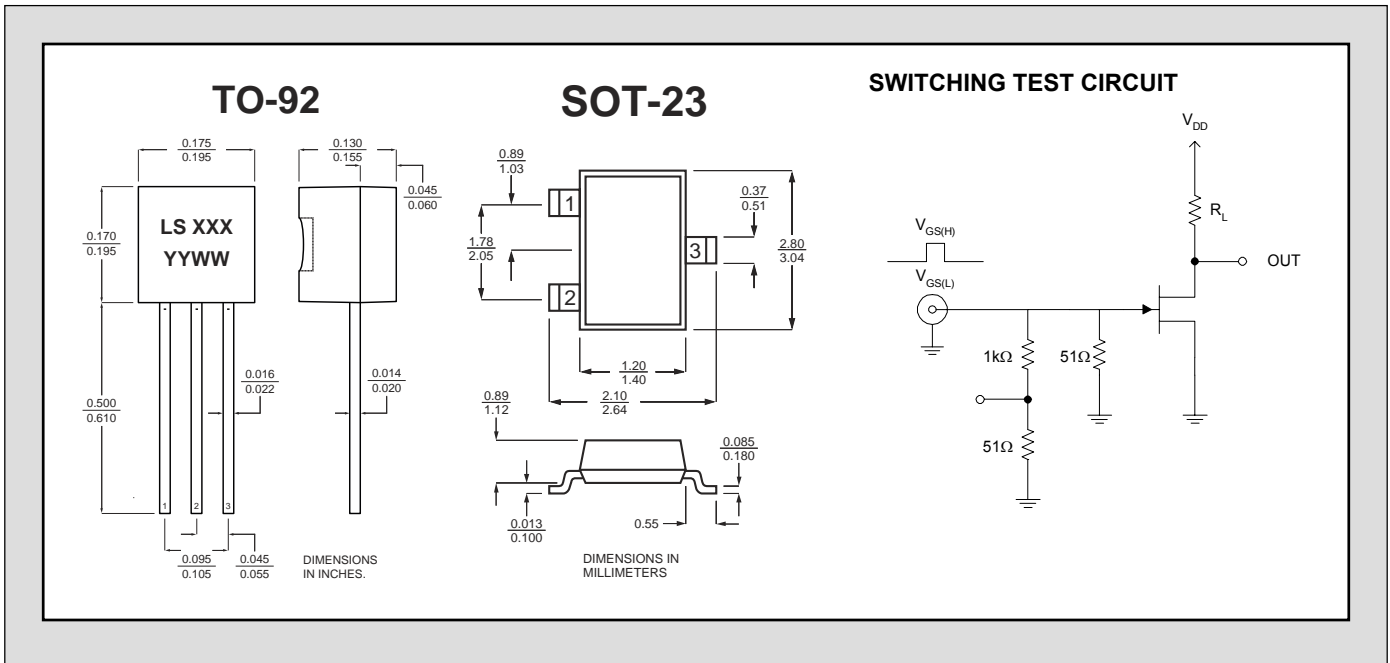
| SYM. | CHARACTERISTIC | TYP | J/SST111 | | J/SST112 | | J/SST113 | | UNIT | CONDITIONS |
|--------------|-------------------------------|-----|----------|-----|----------|-----|----------|-----|-----------------|--|
| | | | MIN | MAX | MIN | MAX | MIN | MAX | | |
| g_{fs} | Forward Transconductance | 6 | | | | | | | mS | $V_{DS} = 20V, I_D = 1mA$ $f = 1kHz$ |
| g_{os} | Output Conductance | 25 | | | | | | | μS | |
| $r_{ds(on)}$ | Drain to Source On Resistance | | | 30 | | 50 | | 100 | Ω | $V_{GS} = 0V, I_D = 0mA$ $f = 1kHz$ |
| C_{iss} | Input Capacitance | 7 | | 12 | | 12 | | 12 | pF | $V_{DS} = 0V, V_{GS} = -10V$ $f = 1MHz$ |
| C_{rss} | Reverse Transfer Capacitance | 3 | | 5 | | 5 | | 5 | | |
| e_n | Equivalent Noise Voltage | 3 | | | | | | | nV/ \sqrt{Hz} | $V_{DG} = 10V, I_D = 1mA$ $f = 1 kHz$ |

SWITCHING CHARACTERISTICS

| SYM. | CHARACTERISTIC | TYP | UNIT | CONDITIONS |
|--------------|----------------|-----|------|------------------------------------|
| $t_{d(on)}$ | Turn On Time | 2 | ns | $V_{DD} = 10V$ $V_{GS(H)} = 0V$ |
| t_r | | 2 | | |
| $t_{d(off)}$ | Turn Off Time | 6 | | |
| t_f | | 15 | | |

SWITCHING CIRCUIT CHARACTERISTICS

| SYM. | J/SST111 | J/SST112 | J/SST113 |
|-------------|--------------|---------------|---------------|
| $V_{GS(L)}$ | -12V | -7V | -5V |
| R_L | 800 Ω | 1600 Ω | 3200 Ω |
| $I_{D(on)}$ | 12mA | 6mA | 3mA |



NOTES

1. Absolute maximum ratings are limiting values above which serviceability may be impaired.
2. Pulse test: PW \leq 300 μs , Duty Cycle \leq 3%

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