



J111 J112 J113

N-CHANNEL SILICON JUNCTION FIELD EFFECT TRANSISTORS

MICRO ELECTRONICS

J111, J112, J113 are N-channel silicon junction field effect transistors designed for analog switching, choppers and commutators applications.

T0-92



DSG

ABSOLUTE MAXIMUM RATINGS

| | | |
|--|-----------------------------------|---------------|
| Gate-Source Voltage | V _{GS} | -35V |
| Gate Current | I _G | 50mA |
| Total Power Dissipation (T _A =25°C) | P _{tot} | 350mW |
| Power Derating (to 125°C) | | 3.5mW/°C |
| Operating Junction & Storage Temperature | T _j , T _{stg} | -55 to +125°C |

ELECTRICAL CHARACTERISTICS (T_A=25°C)

| PARAMETER | SYMBOL | MIN | TYP | MAX | UNIT | TEST CONDITIONS |
|---------------------------------|---------------------|-----|-----|-----|---|---|
| Gate-Source Breakdown Voltage | BV _{GSS} | -35 | | | V | I _G =-1μA V _{DS} =0 |
| Gate Reverse Current (note 1) | I _{GSS} | | | -1 | nA | V _{GS} =-15V V _{DS} =0 |
| Drain Saturation Current J111 | I _{DSS} * | 20 | | | mA | V _{DS} =15V V _{GS} =0 |
| J112 | | 5 | | | mA | V _{DS} =15V V _{GS} =0 |
| J113 | | 2 | | | mA | V _{DS} =15V V _{GS} =0 |
| Drain Cutoff Current (note 1) | I _{D(off)} | | | -1 | nA | V _{DS} =5V V _{GS} =10V |
| Gate-Source Pinchoff Voltage | V _p | | | | V | I _D =1μA V _{DS} =5V |
| J111 | | -3 | -10 | | V | I _D =1μA V _{DS} =5V |
| J112 | | -1 | -5 | | V | I _D =1μA V _{DS} =5V |
| J113 | -0.5 | -3 | | V | I _D =1μA V _{DS} =5V | |
| Drain-Source On Resistance J111 | r _{DS(on)} | | | 30 | Ω | V _{GS} =-10V V _{DS} ≤0.1V |
| J112 | | | | 50 | Ω | V _{GS} =-10V V _{DS} ≤0.1V |
| J113 | | | | 100 | Ω | V _{GS} =-10V V _{DS} ≤0.1V |
| Turn On Delay Time | t _{d(on)} | | 7 | | ns | |
| Rise Time | t _r | | 6 | | ns | |
| Turn Off Delay Time | t _{d(off)} | | 20 | | ns | |
| Fall Time | t _f | | 15 | | ns | |

note 1 : Approximately doubles for every 10°C increase in T_A.

* Pulse Test : Pulse Width = 0.3ms, Duty Cycle = 1%

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