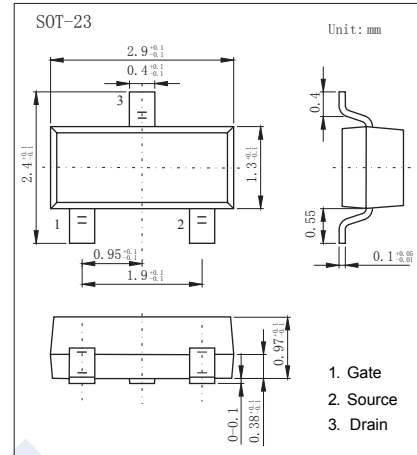
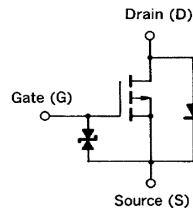


## P-Channel MOSFET

### 2SJ209

#### ■ Features

- $V_{DS} (V) = -100V$
- $I_D = -0.1 A$
- $R_{DS(ON)} < 60 \Omega$  ( $V_{GS} = -10V$ )
- $R_{DS(ON)} < 100 \Omega$  ( $V_{GS} = -4V$ )



#### ■ Absolute Maximum Ratings $T_a = 25^\circ C$

| Parameter                          | Symbol    | Rating     | Unit       |
|------------------------------------|-----------|------------|------------|
| Drain-Source Voltage               | $V_{DS}$  | -100       | V          |
| Gate-Source Voltage                | $V_{GS}$  | $\pm 16$   |            |
| Continuous Drain Current           | $I_D$     | -0.1       | A          |
| Pulsed Drain Current (Note.1)      | $I_{DM}$  | -0.2       |            |
| Power Dissipation                  | $P_D$     | 0.2        | W          |
| Junction Temperature               | $T_J$     | 150        | $^\circ C$ |
| Junction Storage Temperature Range | $T_{stg}$ | -55 to 150 |            |

Note.1:  $PW \leq 10$  ms, duty cycle  $\leq 50\%$

#### ■ Electrical Characteristics $T_a = 25^\circ C$

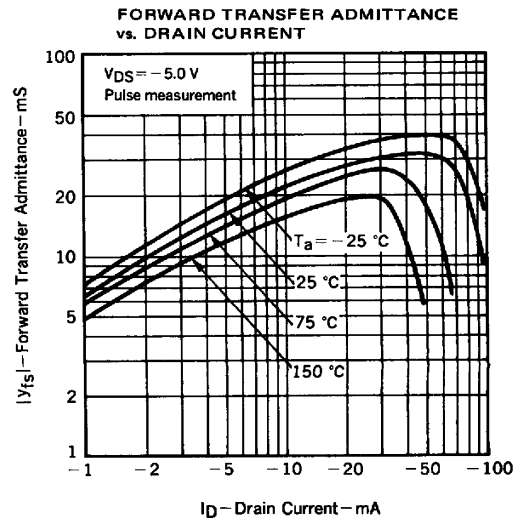
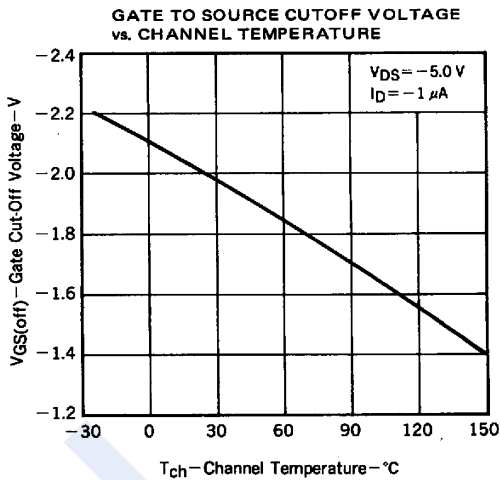
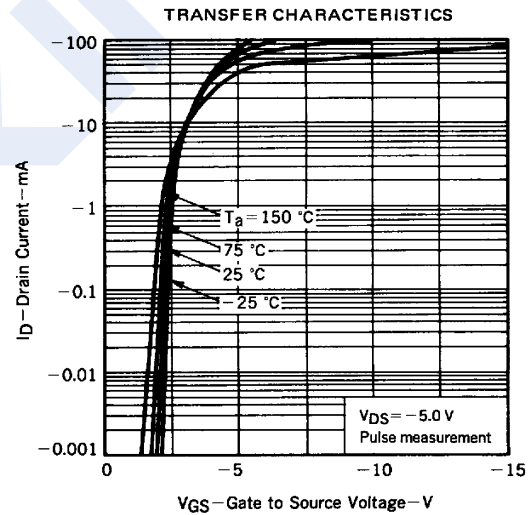
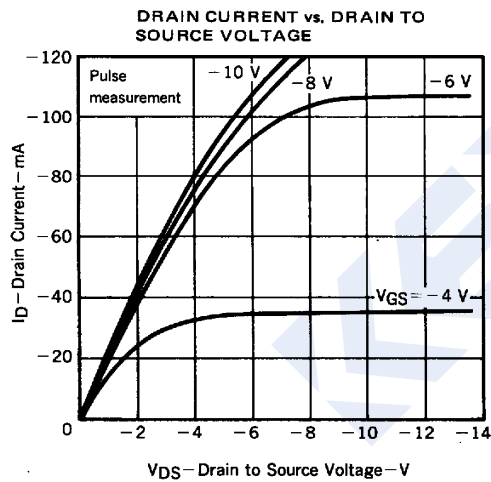
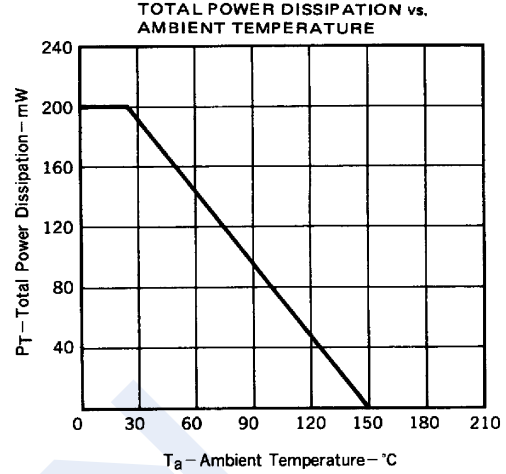
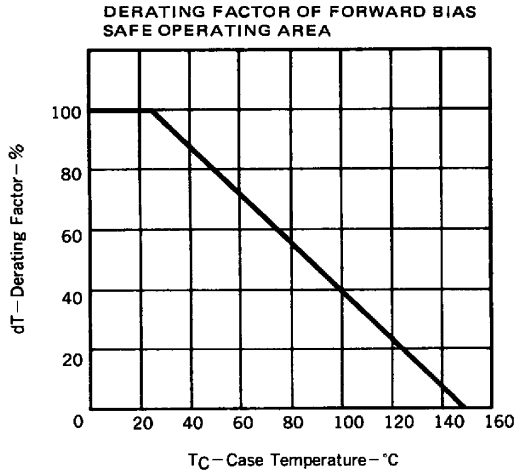
| Parameter                         | Symbol        | Test Conditions  | Min  | Typ | Max      | Unit     |
|-----------------------------------|---------------|--|------|-----|----------|----------|
| Drain-Source Breakdown Voltage    | $V_{DSS}$     | $I_D = -250 \mu A, V_{GS} = 0V$  | -100 |     |          | V        |
| Zero Gate Voltage Drain Current   | $I_{DSS}$     | $V_{DS} = -100V, V_{GS} = 0V$  |      |     | -1       | $\mu A$  |
| Gate-Body leakage current         | $I_{GSS}$     | $V_{DS} = 0V, V_{GS} = \pm 16V$  |      |     | $\pm 10$ | $\mu A$  |
| Gate to Source Cutoff Voltage     | $V_{GS(off)}$ | $V_{GS} = -5V, I_D = -1mA$   | -1.5 |     | -2.5     | V        |
| Static Drain-Source On-Resistance | $R_{DS(on)}$  | $V_{GS} = -10V, I_D = -10mA$   |      |     | 60       | $\Omega$ |
|                                   |               | $V_{GS} = -4V, I_D = -10mA$  |      |     | 100      |          |
| Forward Transconductance          | $g_{FS}$      | $V_{DS} = -5V, I_D = -10mA$  | 15   | 22  |          | mS       |
| Input Capacitance                 | $C_{iss}$     | $V_{GS} = 0V, V_{DS} = -5V, f = 1MHz$  |      | 17  |          | pF       |
| Output Capacitance                | $C_{oss}$     |  |      | 9   |          |          |
| Reverse Transfer Capacitance      | $C_{rss}$     |  |      | 1   |          |          |
| Turn-On Delay Time                | $t_{d(on)}$   |  |      |     | 45       |          |
| Turn-On Rise Time                 | $t_r$         | $V_{GS(on)} = -4V, I_D = -10mA,$<br>$R_L = 500 \Omega, R_G = 10 \Omega, V_{DD} = -5V,$ |      | 75  |          |          |
| Turn-Off Delay Time               | $t_{d(off)}$  |  |      | 25  |          |          |
| Turn-Off Fall Time                | $t_f$         |  |      |     | 80       |          |

#### ■ Marking

|         |     |
|---------|-----|
| Marking | H17 |
|---------|-----|

## P-Channel MOSFET 2SJ209

■ Typical Characteristics



## P-Channel MOSFET 2SJ209

■ Typical Characteristics

