

Ordering number:EN4886



FX603

P-Channel Silicon MOSFET

Ultrahigh-Speed Switching Applications

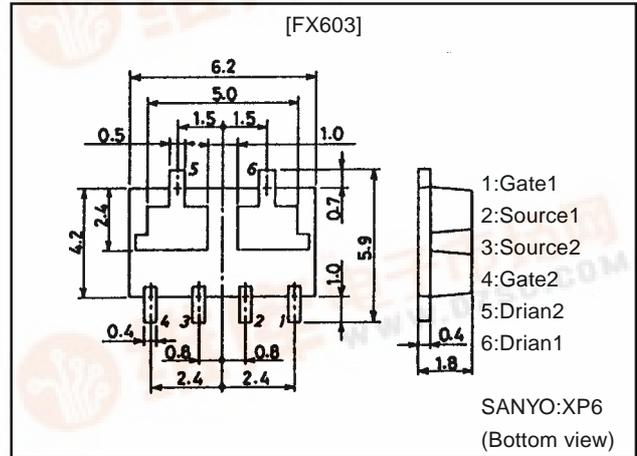
Features

- Composite type composed of two low ON-resistance P-channel MOSFET chips for ultrahigh-speed switching and low-voltage drive.
- Facilitates high-density mounting.
- The FX603 is formed with two chips, each being equivalent to the 2SJ187, placed in one package.
- Matched pair characteristics.

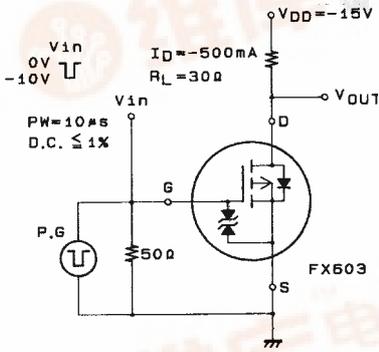
Package Dimensions

unit:mm

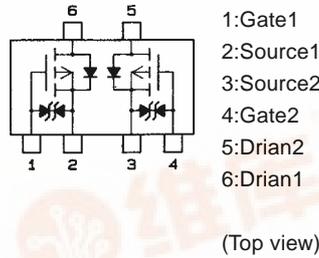
2120



Switching Time Test Circuit



Electrical Connection



Specifications

Absolute Maximum Ratings at Ta = 25°C

| Parameter | Symbol | Conditions | Ratings | Unit |
|-----------------------------|-----------|--|-------------|------|
| Drain-to-Source Voltage | V_{DSS} | | -30 | V |
| Gate-to-Source Voltage | V_{GSS} | | ±15 | V |
| Drain Current (DC) | I_D | | -1 | A |
| Drain Current (Pulse) | I_{DP} | $PW \leq 10\mu s$, duty cycle $\leq 1\%$ | -4 | A |
| Allowable Power Dissipation | P_D | $T_c = 25^\circ C$, 1unit | 6 | W |
| | P_D | Mounted on ceramic board (750mm ² ×0.8mm) 1unit | 1.5 | W |
| Total Dissipation | P_T | Mounted on ceramic board (750mm ² ×0.8mm) | 2 | W |
| Channel Temperature | T_{ch} | | 150 | °C |
| Storage Temperature | T_{stg} | | -55 to +150 | °C |

· Marking:603

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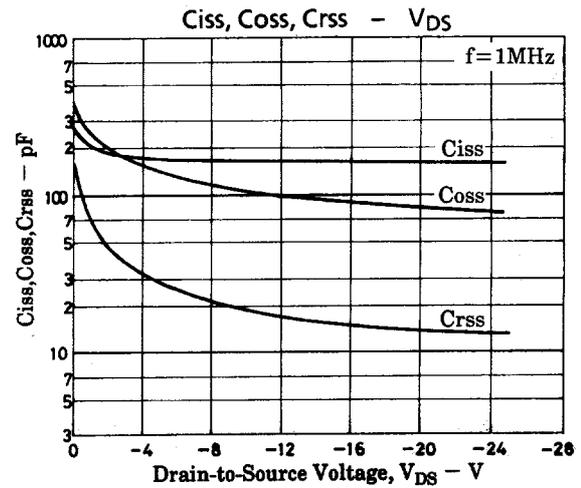
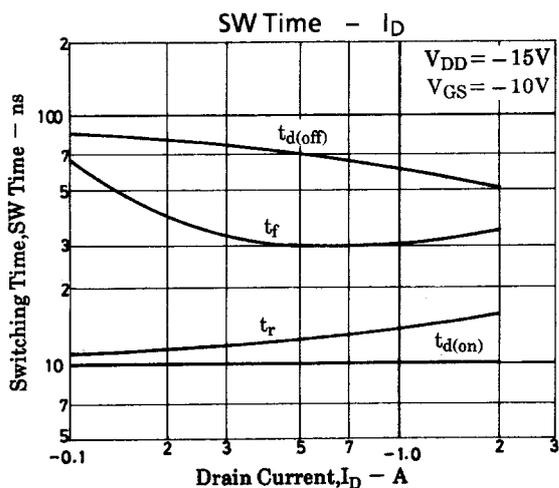
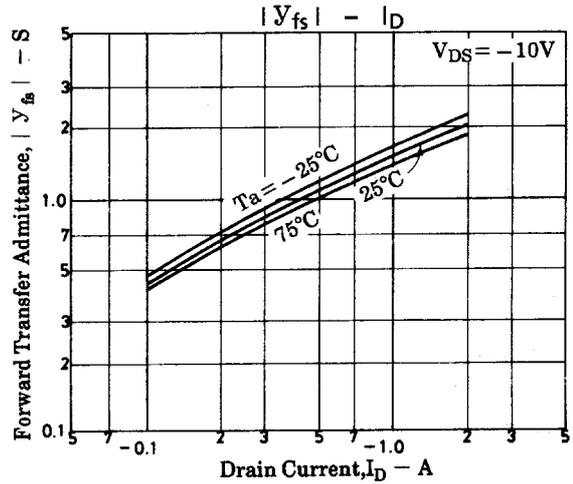
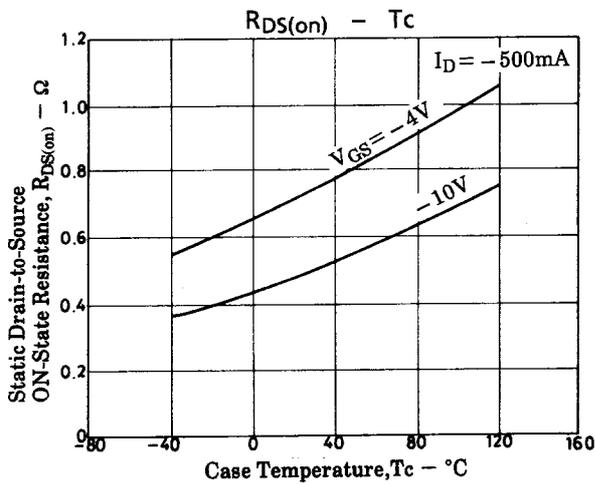
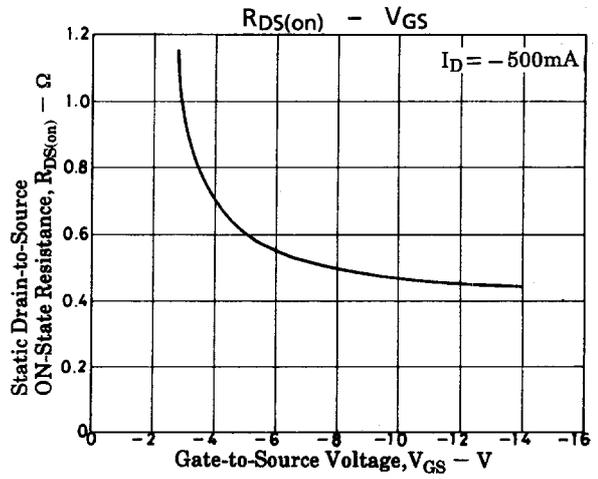
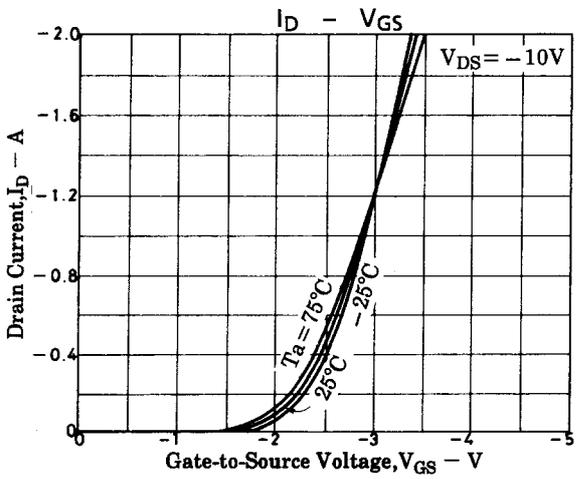
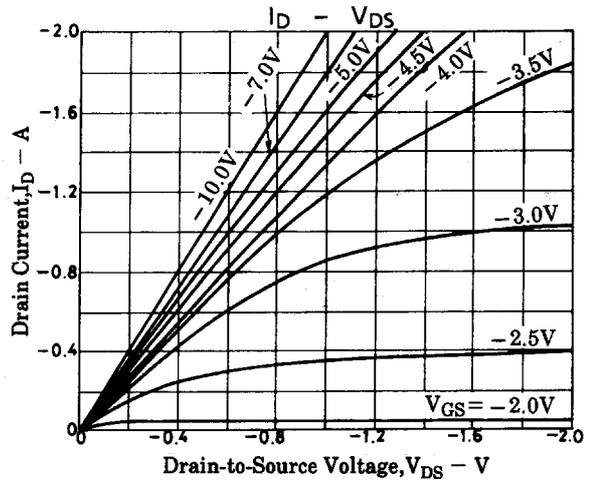
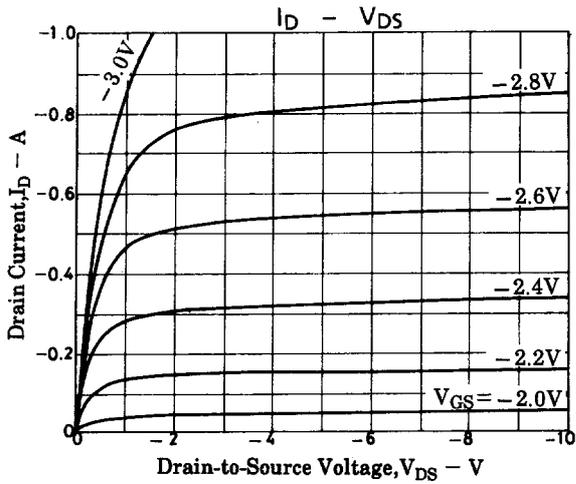
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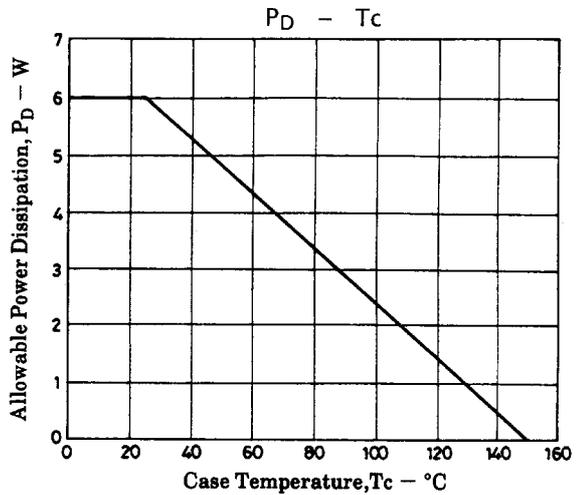
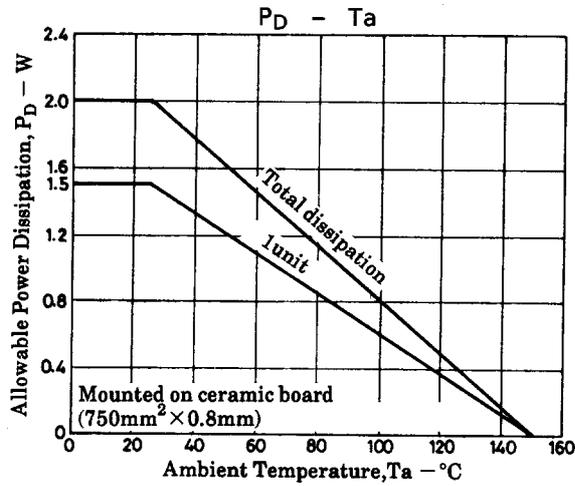
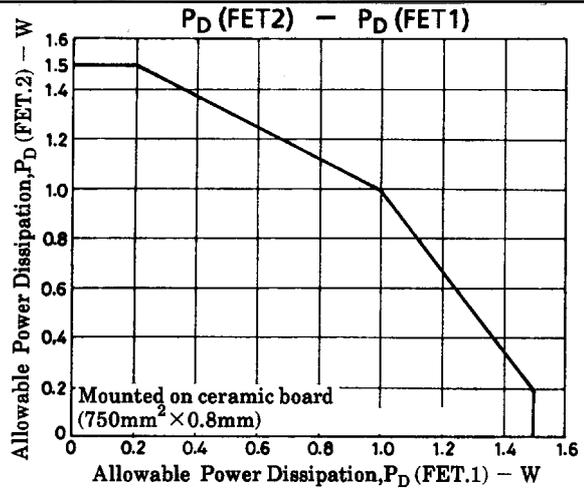
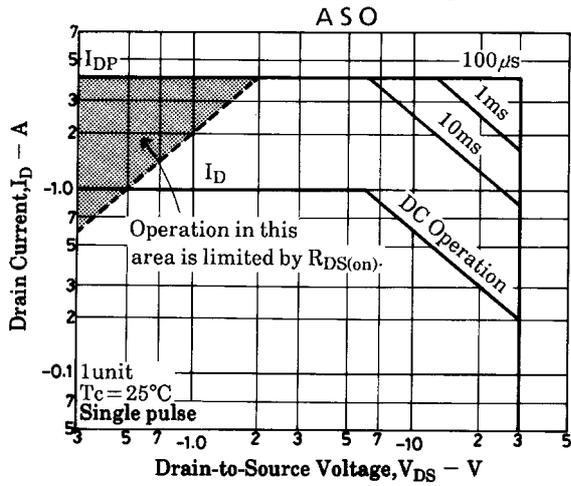
Electrical Characteristics at Ta = 25°C

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|--|---------------|----------------------------|---------|------|----------|----------|
| | | | min | typ | max | |
| D-S Breakdown Voltage | $V_{(BR)DSS}$ | $I_D=-1mA, V_{GS}=0$ | -30 | | | V |
| Zero-Gate Voltage Drain Current | I_{DSS} | $V_{DS}=-30V, V_{GS}=0$ | | | -100 | μA |
| Gate-to-Source Leakage Current | I_{GSS} | $V_{GS}=\pm 12, V_{DS}=0$ | | | ± 10 | μA |
| Cutoff Voltage | $V_{GS(off)}$ | $V_{DS}=-10V, I_D=-1mA$ | -1.0 | | -2.0 | V |
| Forward Transfer Admittance | $ Y_{fs} $ | $V_{DS}=-10V, I_D=-500mA$ | 0.6 | 1.0 | | S |
| Static Drain-to-Source ON-State Resistance | $R_{DS(on)}$ | $I_D=-500mA, V_{GS}=-10V$ | | 0.5 | 0.75 | Ω |
| | $R_{DS(on)}$ | $I_D=-500mA, V_{GS}=-4V$ | | 0.75 | 1.1 | Ω |
| Input Capacitance | C_{iss} | $V_{DS}=-10V, f=1MHz$ | | 170 | | pF |
| Output Capacitance | C_{oss} | $V_{DS}=-10V, f=1MHz$ | | 110 | | pF |
| Reverse Transfer Capacitance | C_{rss} | $V_{DS}=-10V, f=1MHz$ | | 20 | | pF |
| Turn-ON Delay Time | $t_{d(on)}$ | See Specified Test Circuit | | 10 | | ns |
| Rise Time | t_r | See Specified Test Circuit | | 13 | | ns |
| Turn-OFF Delay Time | $t_{d(off)}$ | See Specified Test Circuit | | 70 | | ns |
| Fall Time | t_f | See Specified Test Circuit | | 30 | | ns |
| Diode Forward Voltage | V_{SD} | $I_S=-1A, V_{GS}=0$ | | -0.9 | | V |

FX603



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