



# FX601

P-Channel Silicon MOSFET

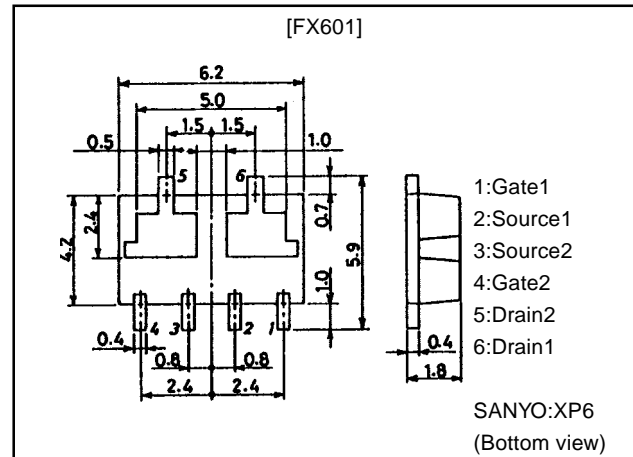
## Ultrahigh-Speed Switching Applications

### Features

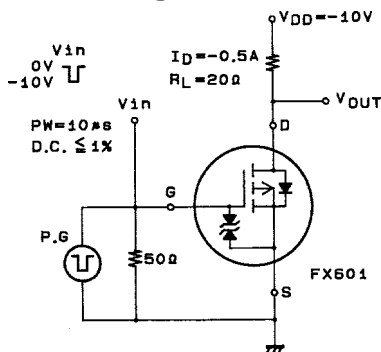
- Composite type composed of two low ON-resistance P-channel MOSFET chips for ultrahigh-speed switching and low-voltage drive.
- Facilitates high-density mounting.
- The FX601 is formed with two chips, each being equivalent to the 2SJ316, placed in one package.
- Matched pair characteristics.

### Package Dimensions

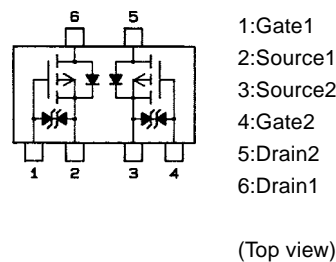
unit:mm  
2120



### Switching Time Test Circuit



### Electrical Connection



### Specifications

#### Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	$V_{DS}$		-12	V
Gate-to-Source Voltage	$V_{GS}$		±12	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	$P_D$	$T_c = 25^\circ C$ , 1 unit	6	W
		Mounted on ceramic board (750mm <sup>2</sup> × 0.8mm) 1 unit	1.5	W
Total Dissipation	$P_T$	Mounted on ceramic board (750mm <sup>2</sup> × 0.8mm)	2	W
Channel Temperature	$T_{ch}$		150	°C
Storage Temperature	$T_{stg}$		-55 to +150	°C

· Marking:601

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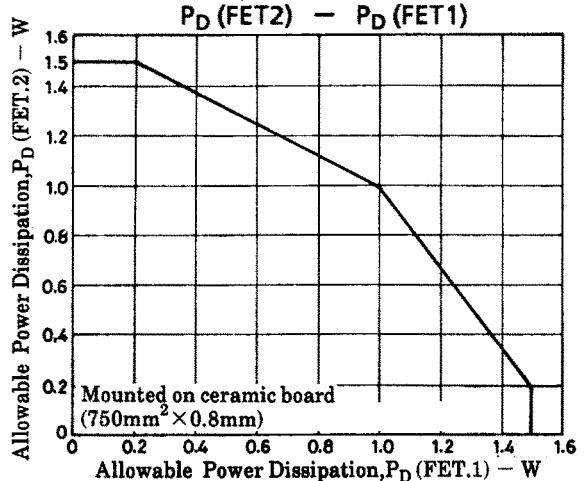
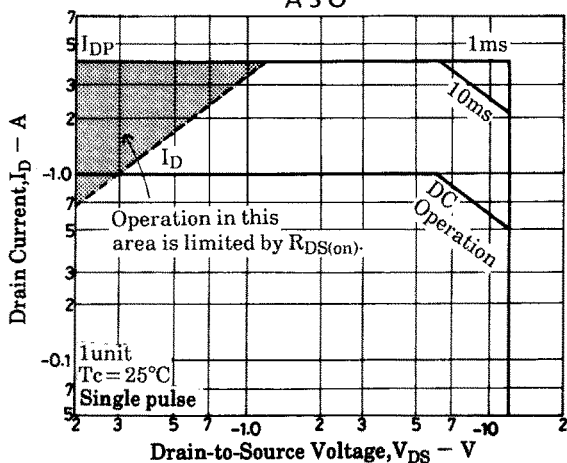
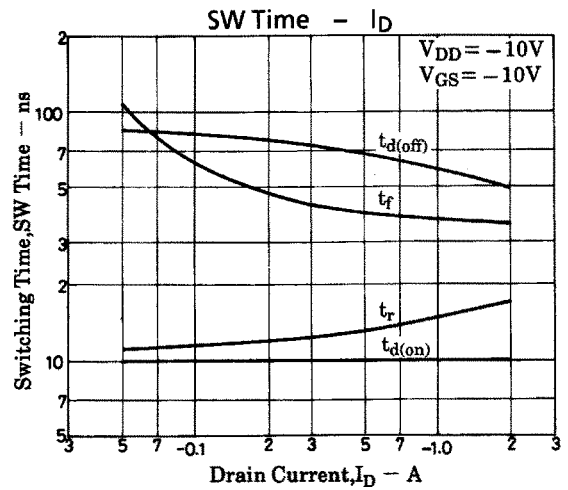
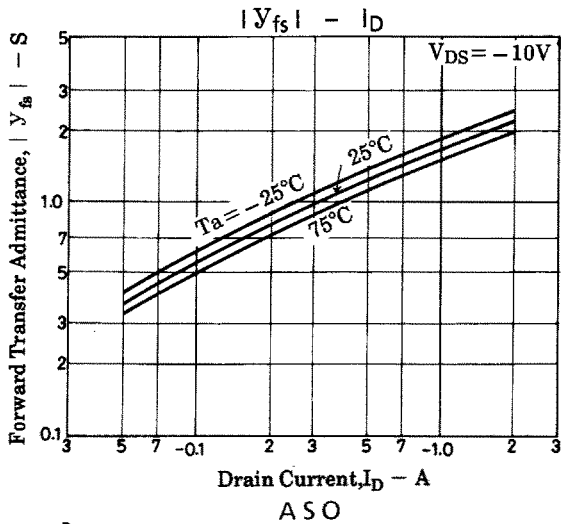
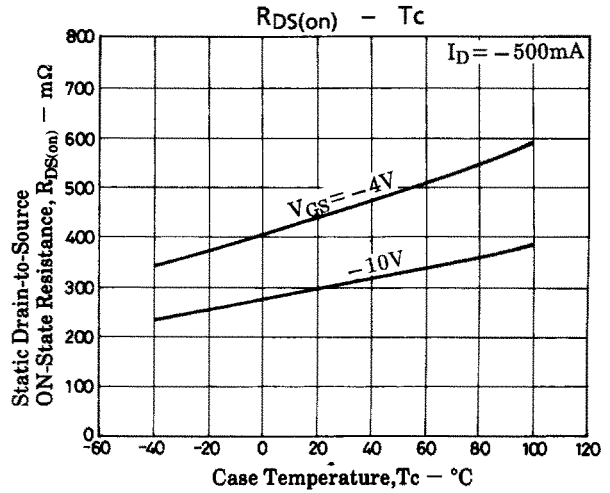
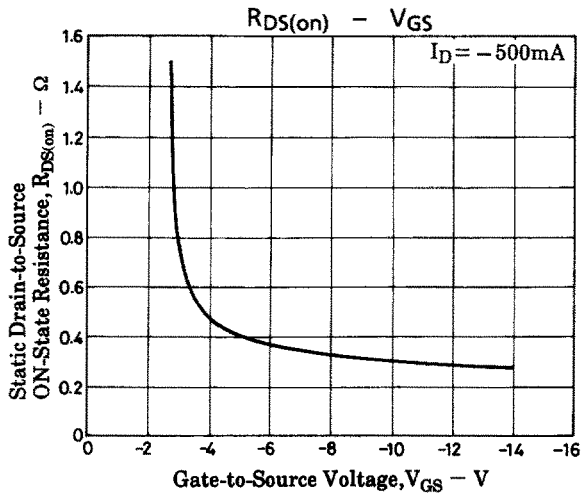
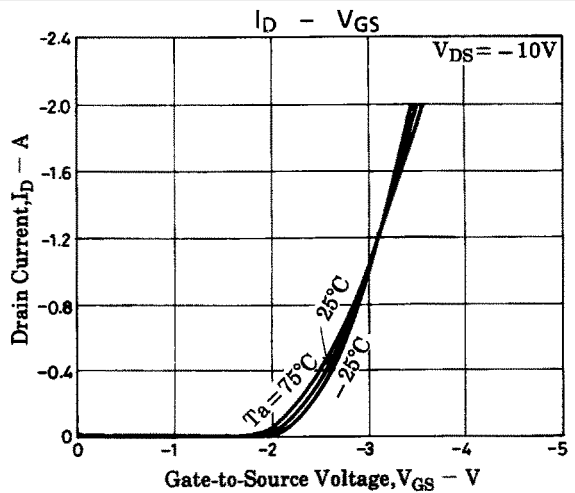
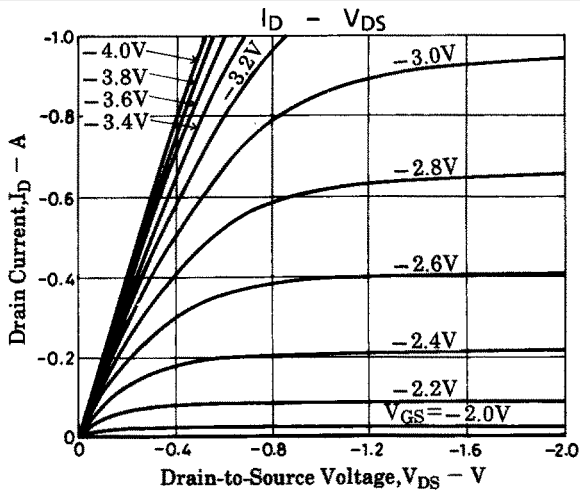
## FX601

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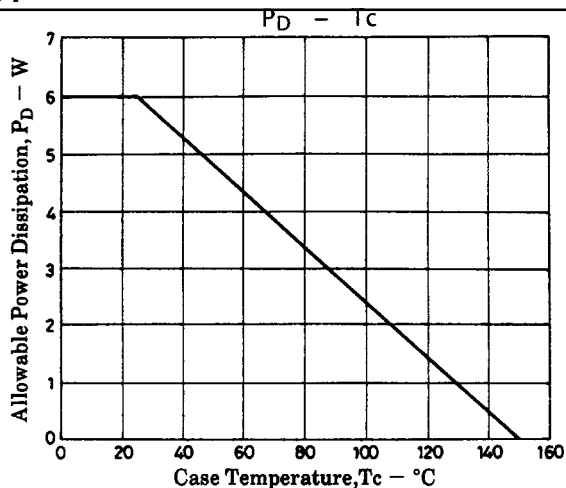
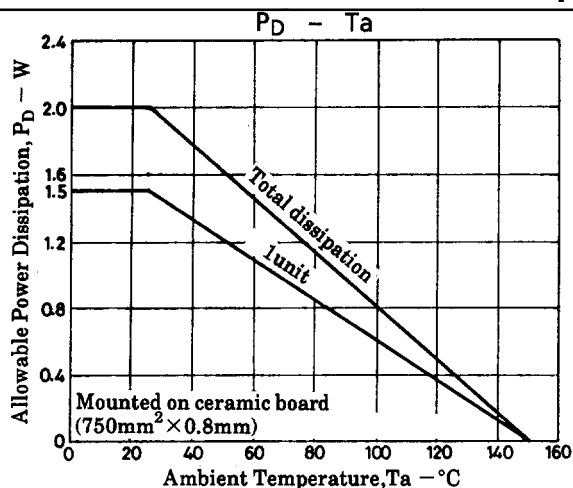
### Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = -1\text{mA}, V_{GS} = 0$	-12			V
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = -12\text{V}, V_{GS} = 0$			-100	$\mu\text{A}$
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS} = \pm 12, V_{DS} = 0$			$\pm 10$	$\mu\text{A}$
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = -10\text{V}, I_D = -1\text{mA}$	-1.0		-2.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = -10\text{V}, I_D = -500\text{mA}$	0.7	1.2		S
Static Drain-to-Source ON-State Resistance	$R_{DS(on)}$	$I_D = -500\text{mA}, V_{GS} = -10\text{V}$		0.3	0.42	$\Omega$
	$R_{DS(on)}$	$I_D = -500\text{mA}, V_{GS} = -4\text{V}$		0.45	0.63	$\Omega$
Input Capacitance	$C_{iss}$	$V_{DS} = -10\text{V}, f = 1\text{MHz}$		170		pF
Output Capacitance	$C_{oss}$	$V_{DS} = -10\text{V}, f = 1\text{MHz}$		170		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = -10\text{V}, f = 1\text{MHz}$		40		pF
Turn-ON Delay Time	$t_{d(on)}$	See Specified Test Circuit		10		ns
Rise Time	$t_r$	See Specified Test Circuit		14		ns
Turn-OFF Delay Time	$t_{d(off)}$	See Specified Test Circuit		70		ns
Fall Time	$t_f$	See Specified Test Circuit		40		ns
Diode Forward Voltage	$V_{SD}$	$I_S = -1\text{A}, V_{GS} = 0$		-0.9		V

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