



FX603

P-Channel Silicon MOSFET

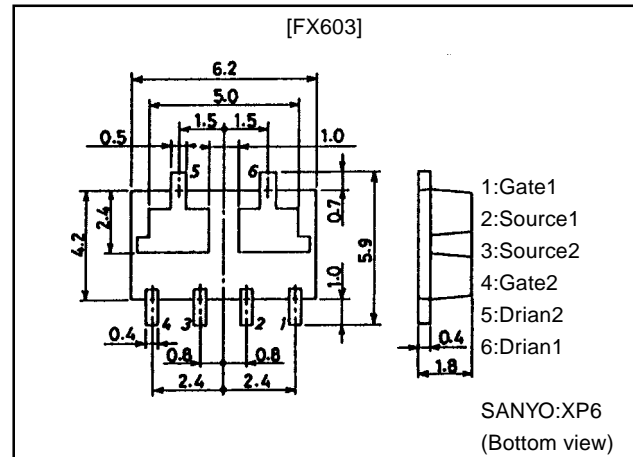
Ultrahigh-Speed Switching Applications

Features

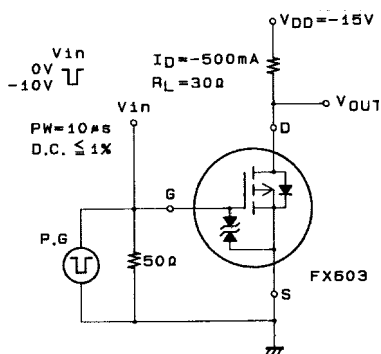
- Composite type composed of two low ON-resistance P-channel MOSFET chips for ultrahigh-speed switching and low-voltage drive.
- Facilitates high-density mounting.
- The FX603 is formed with two chips, each being equivalent to the 2SJ187, placed in one package.
- Matched pair characteristics.

Package Dimensions

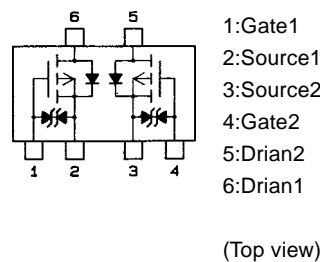
unit:mm
2120



Switching Time Test Circuit



Electrical Connection



Specifications

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

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}	$PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$	-4	A
Allowable Power Dissipation	P_D	$T_c = 25^\circ\text{C}$, 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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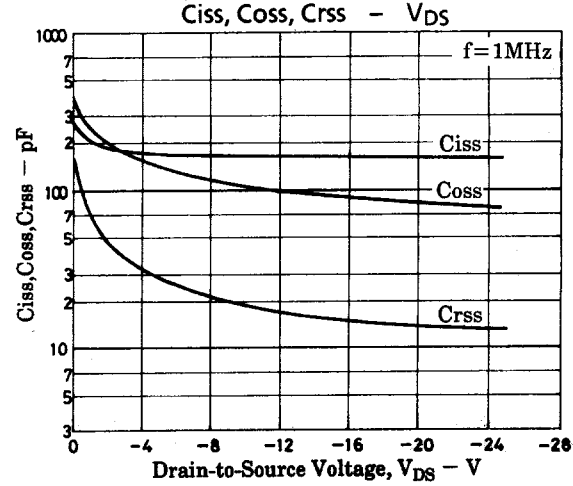
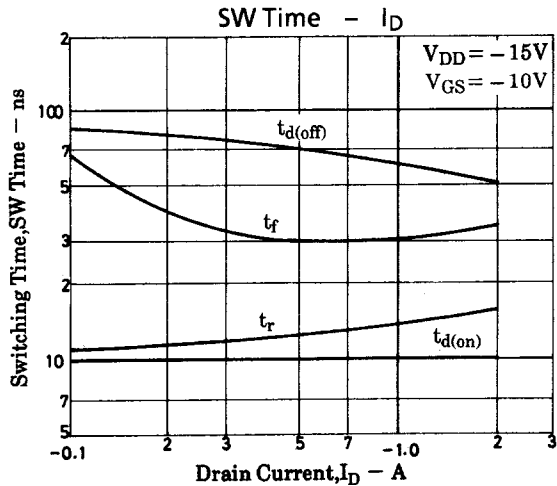
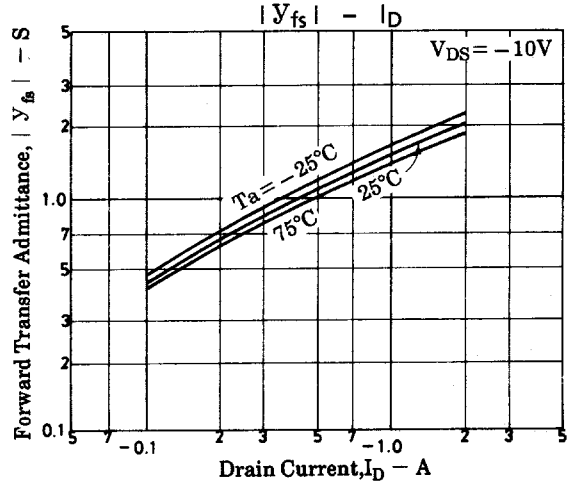
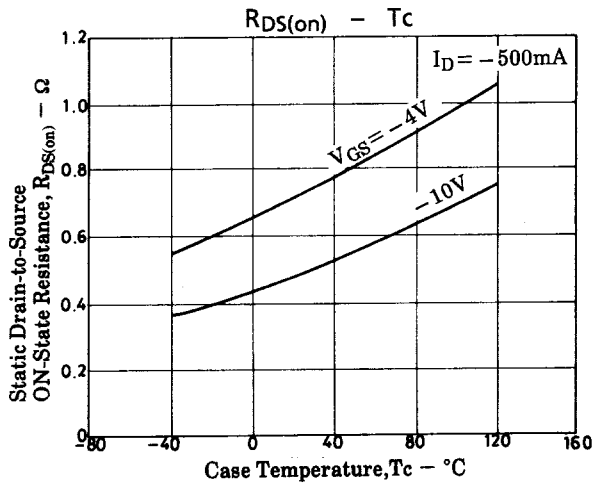
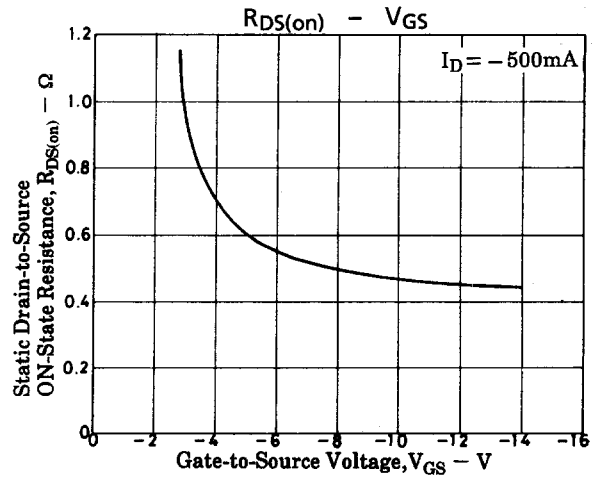
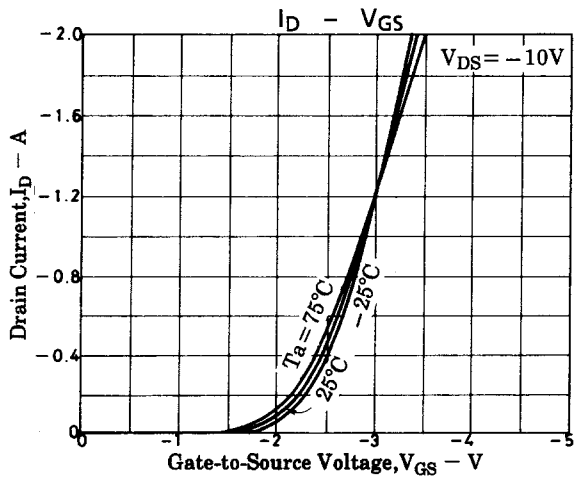
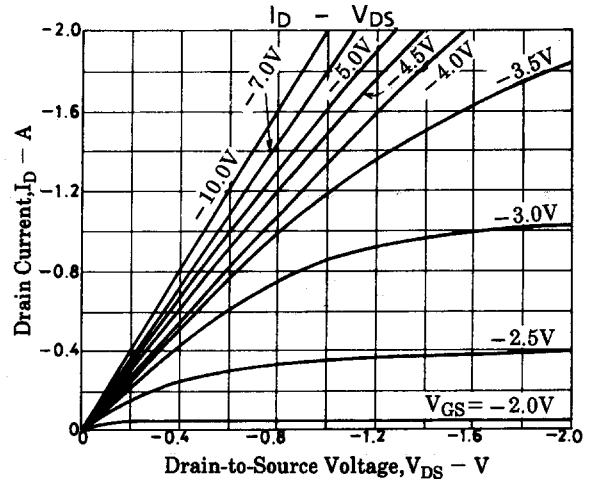
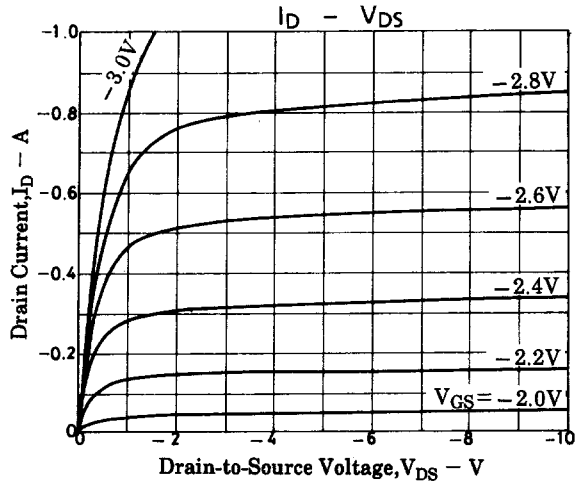
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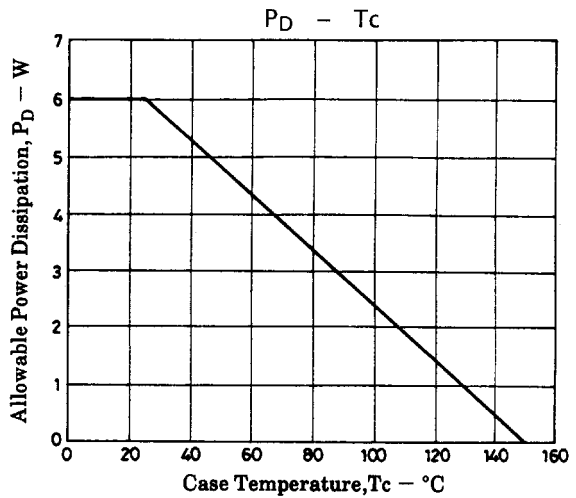
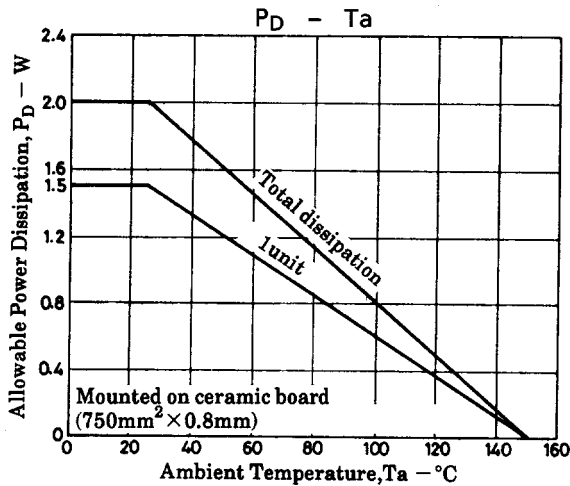
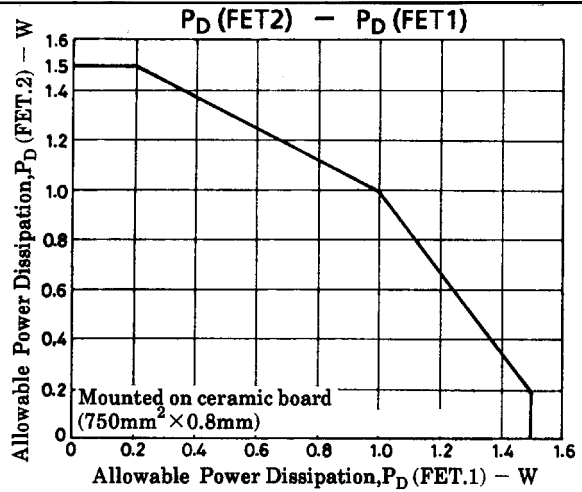
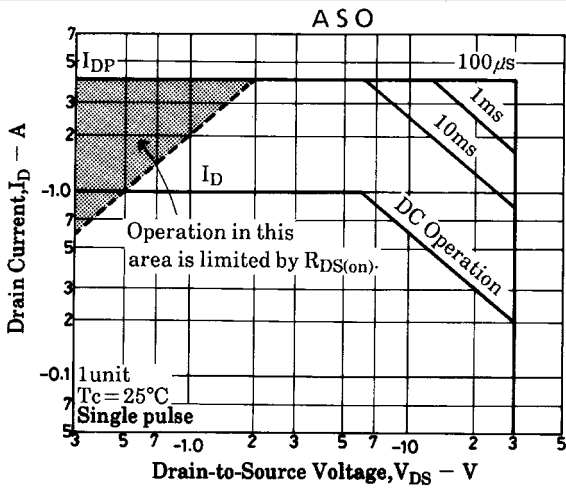
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Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = -1\text{mA}, V_{GS} = 0$	-30			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -30\text{V}, V_{GS} = 0$			-100	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 12, V_{DS} = 0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = -10\text{V}, I_D = -1\text{mA}$	-1.0		-2.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = -10\text{V}, I_D = -500\text{mA}$	0.6	1.0		S
Static Drain-to-Source ON-State Resistance	$R_{DS(on)}$	$I_D = -500\text{mA}, V_{GS} = -10\text{V}$		0.5	0.75	Ω
	$R_{DS(on)}$	$I_D = -500\text{mA}, V_{GS} = -4\text{V}$		0.75	1.1	Ω
Input Capacitance	C_{iss}	$V_{DS} = -10\text{V}, f = 1\text{MHz}$		170		pF
Output Capacitance	C_{oss}	$V_{DS} = -10\text{V}, f = 1\text{MHz}$		110		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = -10\text{V}, f = 1\text{MHz}$		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}	$I_S = -1\text{A}, V_{GS} = 0$		-0.9		V

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