

**FX605** 

**P-Channel Silicon MOSFET** 

# **Ultrahigh-Speed Switching Applications**

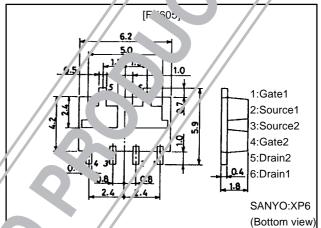
#### **Features**

- · 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 FX605 is formed with two chips, each being equivalent to the 2SJ190, placed in one package.
- · Matched pair characteristics.

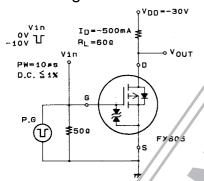
## Package Dimensions

unit:mm

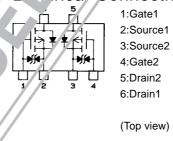
2120



#### Switching Time Test CIrcuit



### L'ec rical Connection



## **Specifications**

Absolute Maximum Ratings  $T = 25^{\circ}$ 

Partmeter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	Voss		-60	V
Gate-to-Source Voltage	VGSS		±15	V
Drain Currer.t (りC)	I <sub>D</sub>		-1	Α
Drain Cur en (Pulse)	I <sub>DP</sub>	PW≤10µs, duty cycle≤1%	-4	Α
Allowable Jower Down in	PD	Tc=25°C, 1unit	6	W
	PD	Mounted on ceramic board (750mm <sup>2</sup> ×0.8mm) 1unit	1.5	W
Total Dissipation	PT	Mounted on ceramic board (750mm <sup>2</sup> ×0.8mm)	2	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

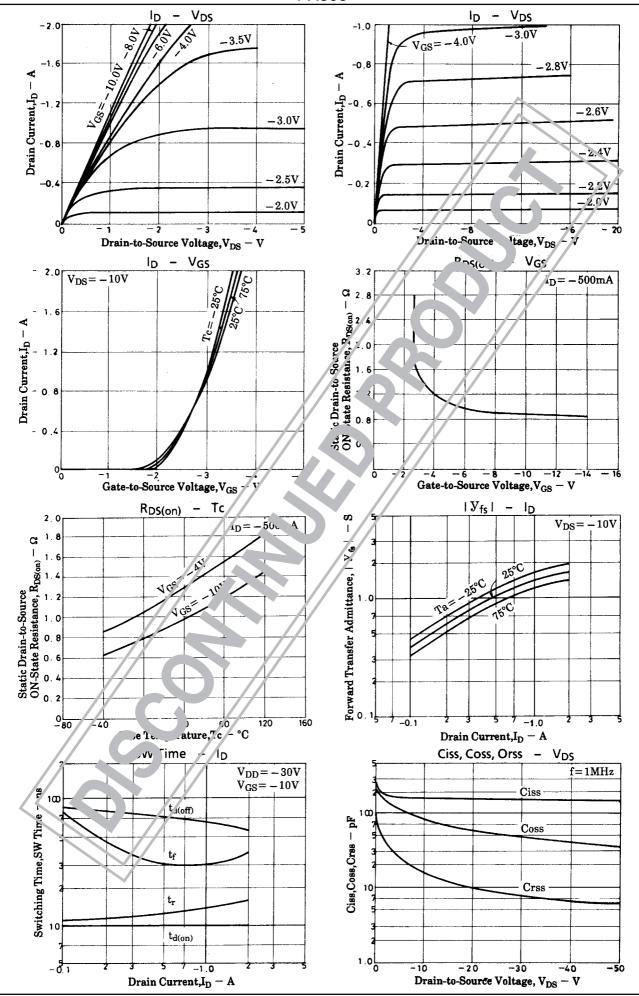
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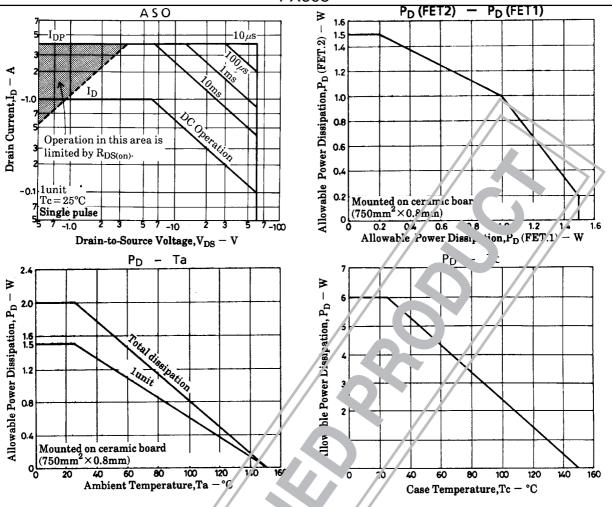
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### Electrical Characteristics at $Ta = 25^{\circ}C$

Dozometov	Symbol	Conditions	Ratings			Unit
Parameter		Conditions		typ	max	Uill
D-S Breakdown Voltage	V(BR)DSS	I <sub>D</sub> =-1mA, V <sub>GS</sub> =0	-60			V
Zero-Gate Voltage Drain Current	IDSS	V <sub>DS</sub> =-60V, V <sub>GS</sub> =0			-100	μA
Gate-to-Source Leakage Current	IGSS	$V_{GS}=\pm 12, V_{DS}=0$			±10	μA
Cutoff Voltage	VGS(off)	V <sub>DS</sub> =-10V, I <sub>D</sub> =-1mA	-1.0		- 2.0	V
Forward Transfer Admittance	Yfs	V <sub>DS</sub> =-10V, I <sub>D</sub> =-500mA	0	1.0		S
Static Drain-to-Source ON-State Resistance	R <sub>DS(on)</sub>	I <sub>D</sub> =-500mA, V <sub>GS</sub> =-10V		0.9	1.2	Ω
	R <sub>DS(on)</sub>	I <sub>D</sub> =-500mA, V <sub>GS</sub> =-4V		1.2	1.ô	Ω
Input Capacitance	Ciss	V <sub>DS</sub> =-20V, f=1MHz		160		pF
Output Capacitance	Coss	V <sub>DS</sub> =–20V, f=1MHz		60	77	pF
Reverse Transfer Capacitance	Crss	V <sub>DS</sub> =-20V, f=1MHz		10	7	pF
Turn-ON Delay Time	t <sub>d</sub> (on)	See Specified Test Circuit		10		ns
Rise Time	t <sub>r</sub>	See Specified Test Circuit		/3		ns
Turn-OFF Delay Time	td(off)	See Specified Test Circuit		70		ns
Fall Time	t <sub>f</sub>	See Specified Test Circuit		30		ns
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =-1A, V <sub>GS</sub> =0		-0.9		V



#### FX605



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