

**SANYO**

**FX606**

N-Channel Silicon MOSFET

## Ultrahigh-Speed Switching Applications

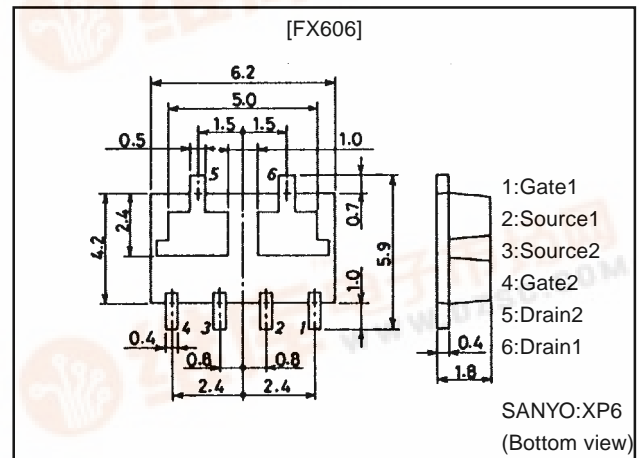
### Features

- Composite type composed of two low ON-resistance N-channel MOSFET chips for ultrahigh-speed switching and low-voltage drive.
- Facilitates high-density mounting.
- The FX606 is formed with two chips, each being equivalent to the 2SK1470, placed in one package.
- Matched pair characteristics.

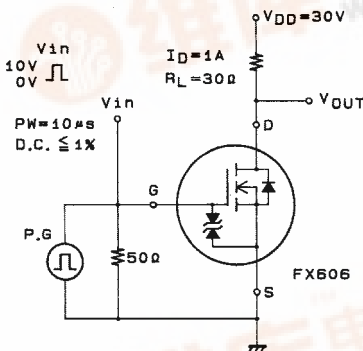
### Package Dimensions

unit:mm

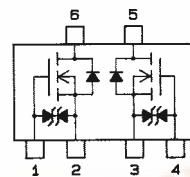
2120



### Switching Time Test Circuit



### Electrical Connection



- 1: Gate1
- 2: Source1
- 3: Source2
- 4: Gate2
- 5: Drain2
- 6: Drain1

(Top view)

### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	$V_{DSS}$		60	V
Gate-to-Source Voltage	$V_{GSS}$		$\pm 15$	V
Drain Current (DC)	$I_D$		2	A
Drain Current (Pulse)	$I_{DP}$	$PW \leq 10 \mu\text{s}$ , duty cycle $\leq 1\%$	8	A
Allowable Power Dissipation	$P_D$	$T_c = 25^\circ\text{C}$ , 1 unit	6	W
	$P_D$	Mounted on ceramic board (750mm $^2$ $\times$ 0.8mm) 1 unit	1.5	W
Total Dissipation	$P_T$	Mounted on ceramic board (750mm $^2$ $\times$ 0.8mm)	2	W
Channel Temperature	$T_{ch}$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

· Marking: 606

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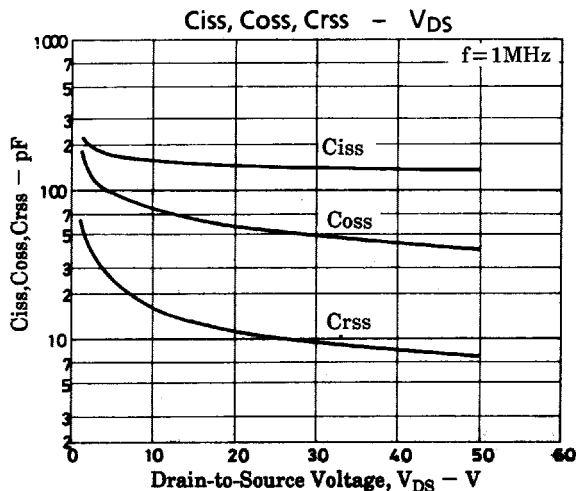
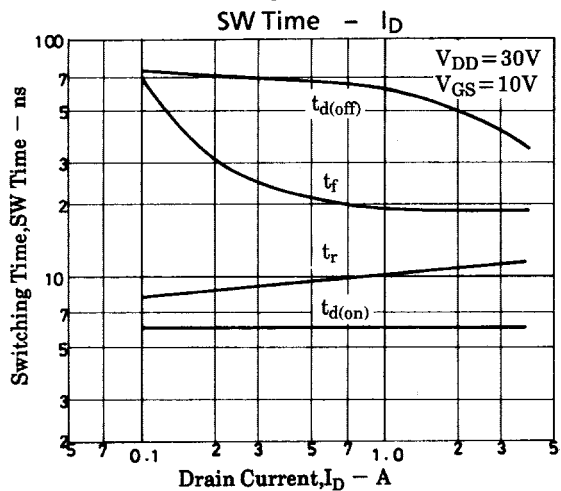
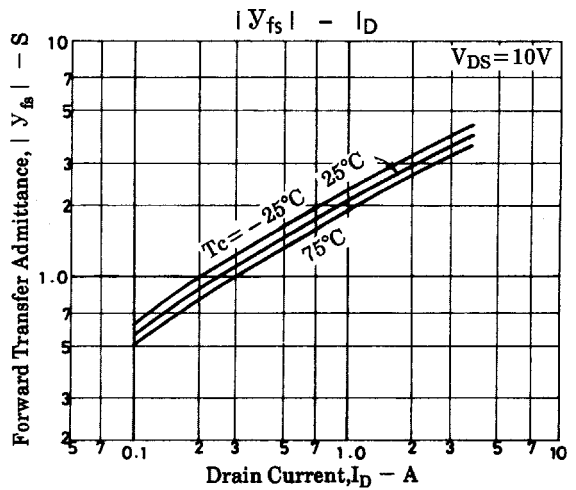
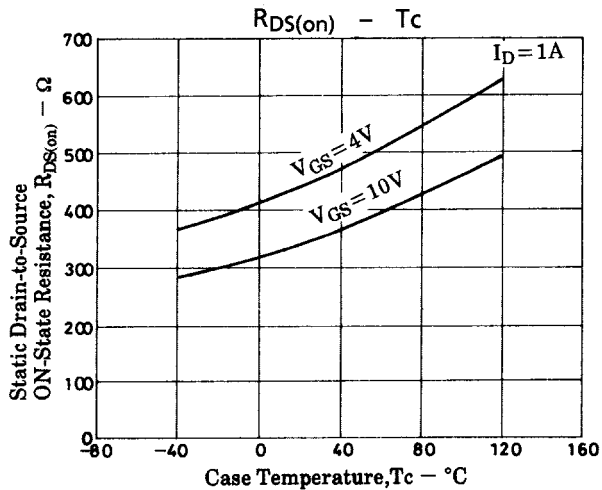
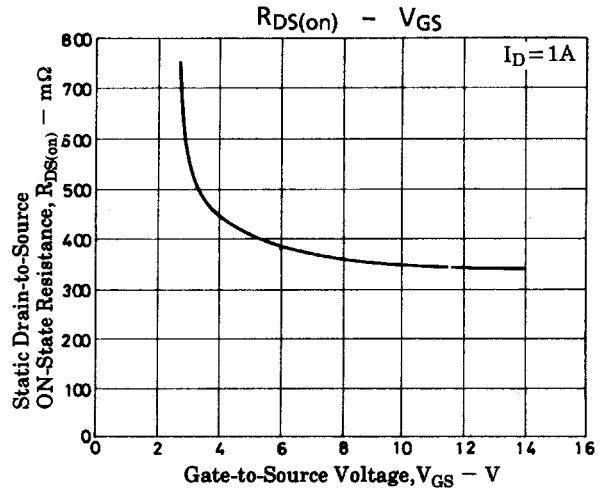
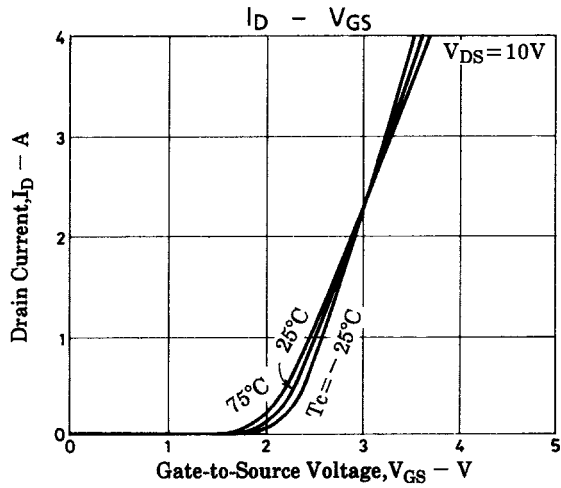
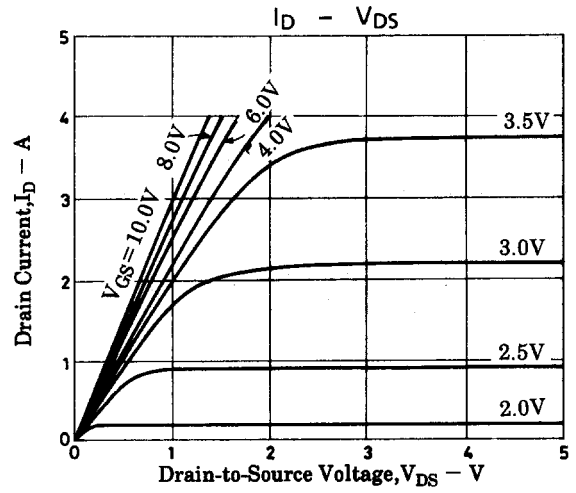
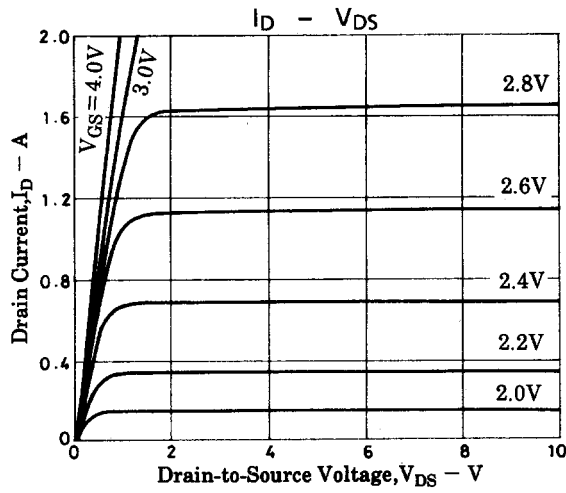
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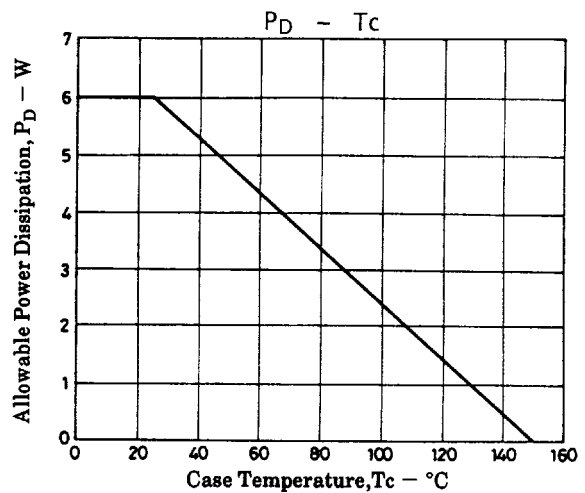
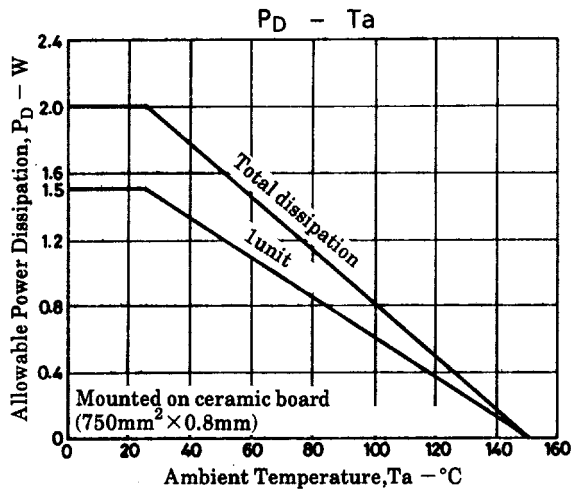
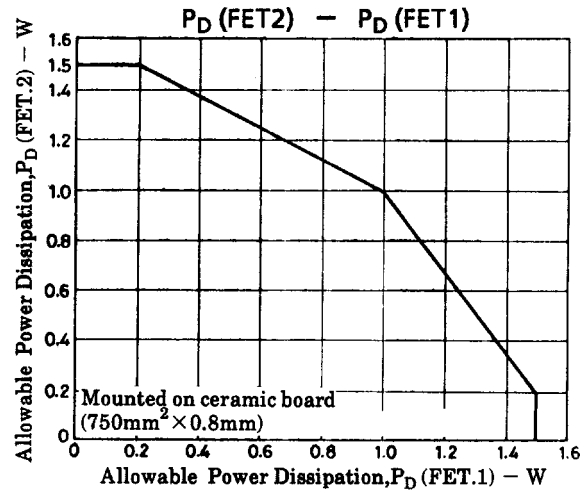
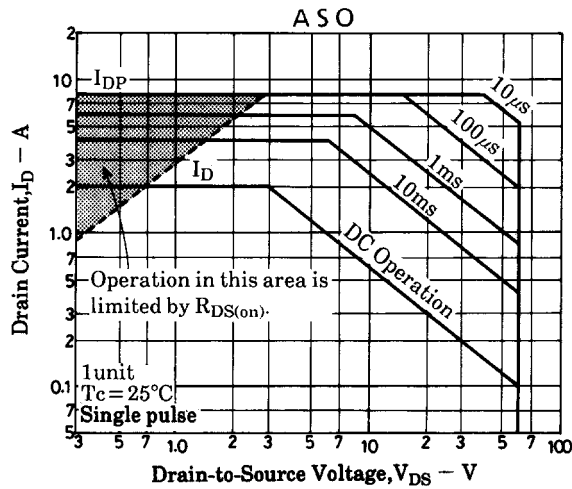
### Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1mA, V_{GS}=0$	60			V
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=60V, V_{GS}=0$			100	$\mu A$
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS}=\pm 12, V_{DS}=0$			$\pm 10$	$\mu A$
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V, I_D=1mA$	1.0		2.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS}=10V, I_D=1A$	1.2	2.0		S
Static Drain-to-Source ON-State Resistance	$R_{DS(on)}$	$I_D=1A, V_{GS}=10V$		0.35	0.45	$\Omega$
	$R_{DS(on)}$	$I_D=1A, V_{GS}=4V$		0.45	0.6	$\Omega$
Input Capacitance	$C_{iss}$	$V_{DS}=20V, f=1MHz$		150		pF
Output Capacitance	$C_{oss}$	$V_{DS}=20V, f=1MHz$		60		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS}=20V, f=1MHz$		12		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		6		ns
Rise Time	$t_r$	See specified Test Circuit		10		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		60		ns
Fall Time	$t_f$	See specified Test Circuit		20		ns
Diode Forward Voltage	$V_{SD}$	$I_S=1.2A, V_{GS}=0$		1.0		V

# FX606



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