



# FX205

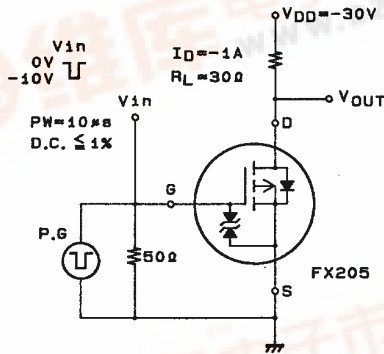
P-Channel Silicon MOSFET

## Very High-Speed Switching Applications

### Features

- Low ON-resistance.
- Very high-speed switching.
- Low-voltage drive.

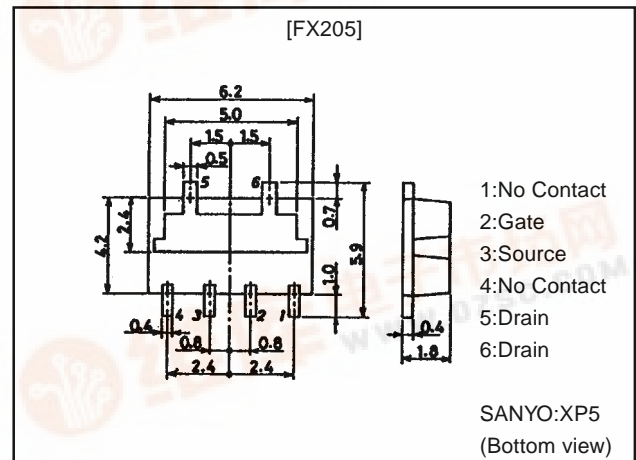
### Switching Time Test Circuit



### Package Dimensions

unit:mm

2121



### Specifications

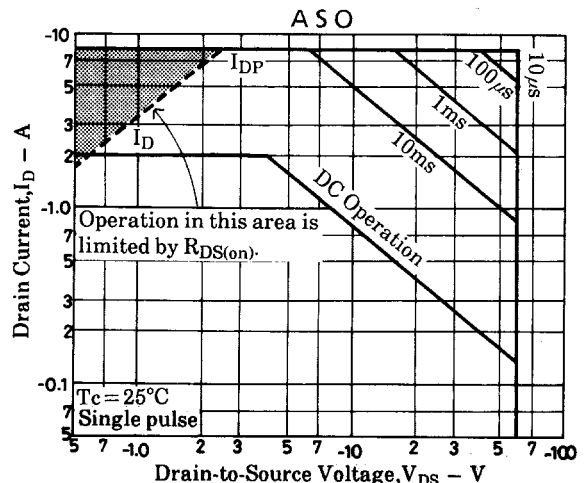
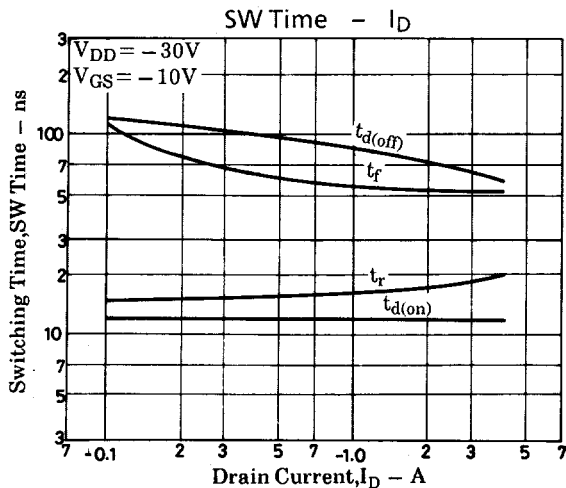
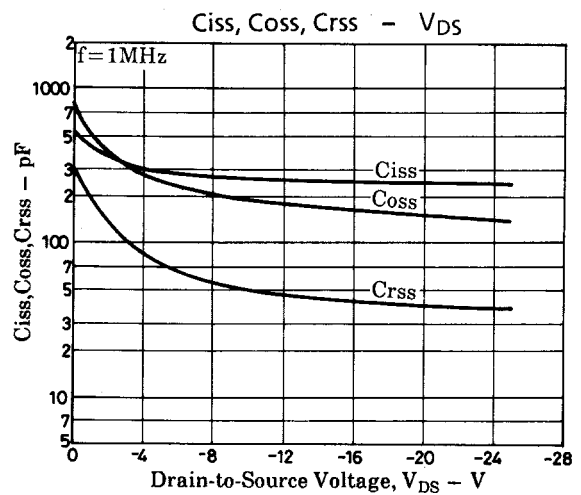
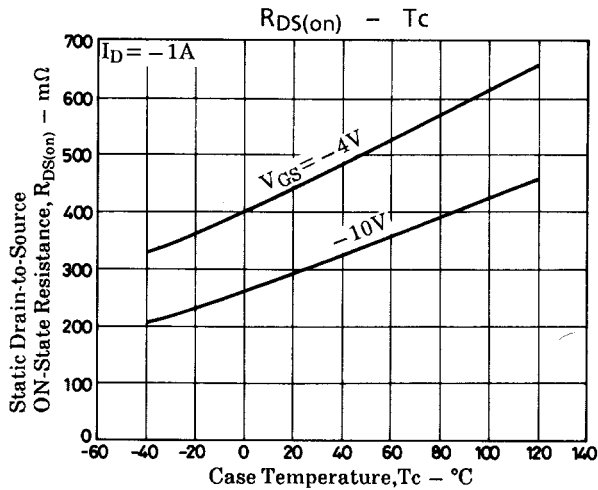
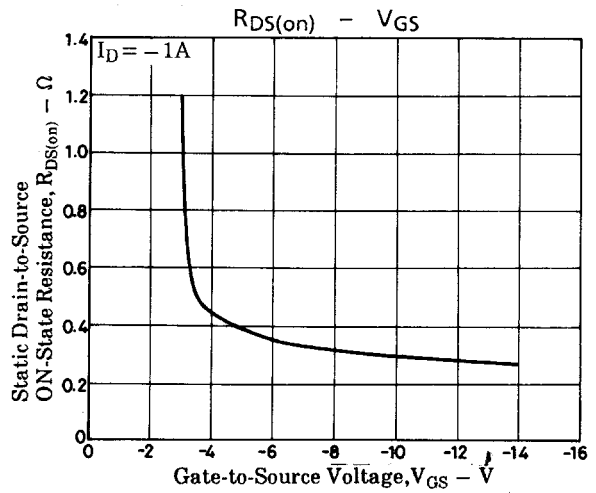
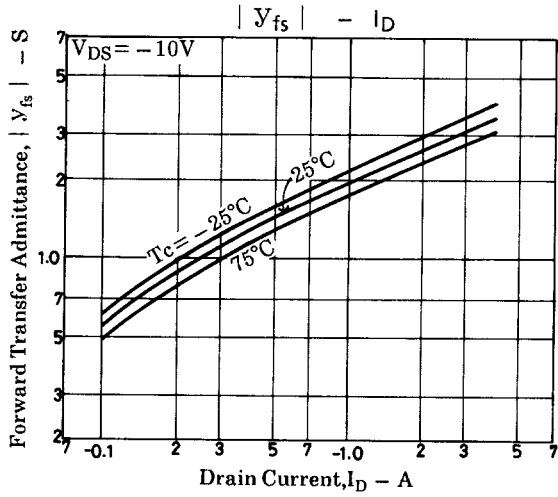
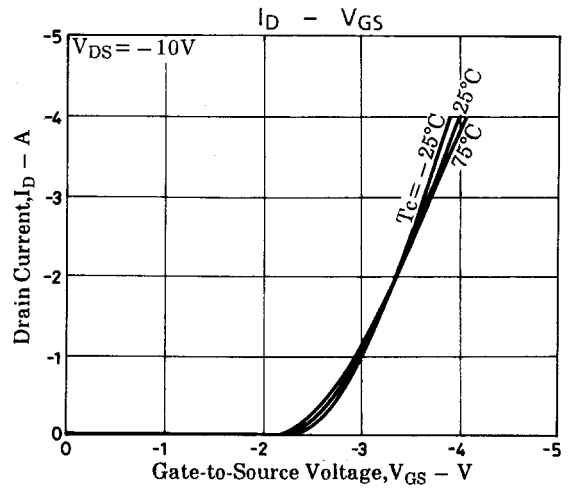
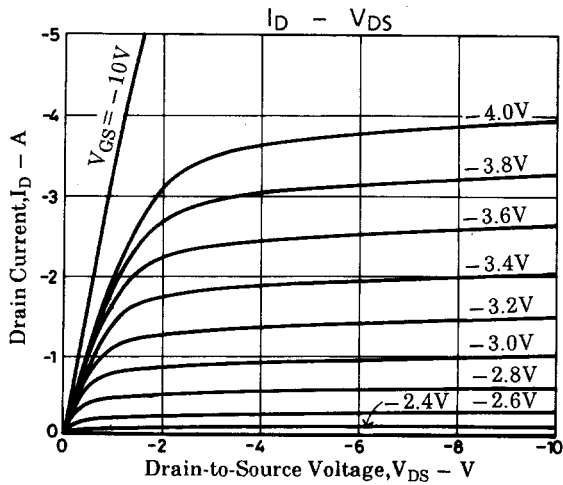
#### Absolute Maximum Ratings at Ta = 25°C

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

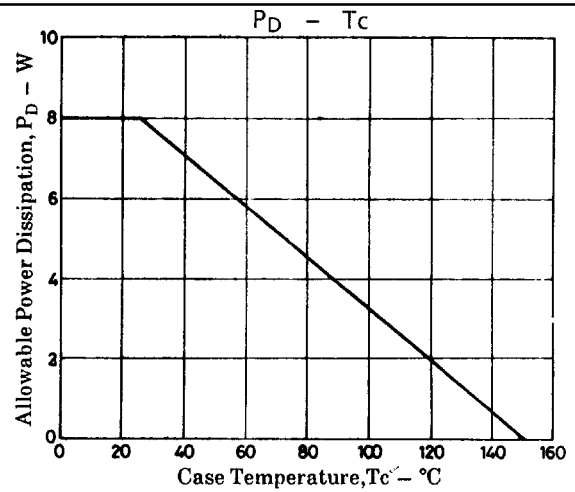
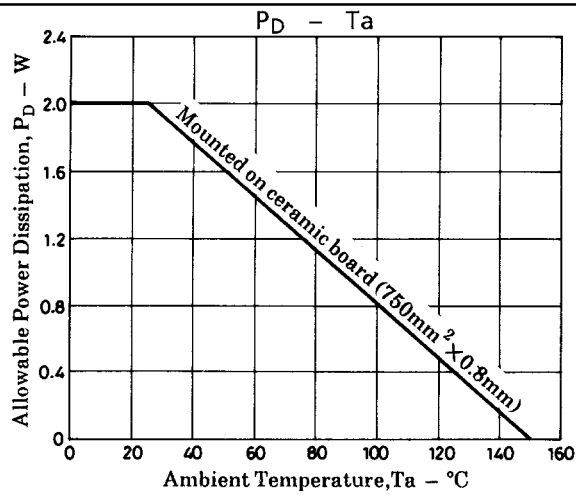
#### Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = -1mA$ , $V_{GS} = 0$	-60			V
G-S Breakdown Voltage	$V_{(BR)GSS}$	$I_G = \pm 100\mu s$ , $V_{DS} = 0$	$\pm 25$			V
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = -60V$ , $V_{GS} = 0$			-100	$\mu A$
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS} = \pm 20V$ , $V_{DS} = 0$			$\pm 10$	$\mu A$
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = -10V$ , $I_D = -1mA$	-1.5		-2.5	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = -10V$ , $I_D = -1A$	1.2	2		S
Static Drain-to-Source ON-State Resistance	$R_{DS(on)}$	$I_D = -1A$ , $V_{GS} = -10V$	300	400		$m\Omega$
		$I_D = -1A$ , $V_{GS} = -4V$	450	650		$m\Omega$
Input Capacitance	$C_{iss}$	$V_{DS} = -20V$ , $f = 1MHz$	240			pF
Output Capacitance	$C_{oss}$	$V_{DS} = -20V$ , $f = 1MHz$	150			pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = -20V$ , $f = 1MHz$	40			pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit	12			ns
Rise Time	$t_r$	See specified Test Circuit	16			ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit	85			ns
Fall Time	$t_f$	See specified Test Circuit	55			ns
Diode Forward Voltage	$V_{SD}$	$I_S = -2A$ , $V_{GS} = 0$	-1.0	-1.5		V

# FX205



## FX205



■ No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.

■ Anyone purchasing any products described or contained herein for an above-mentioned use shall:

- ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use:
- ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.

■ Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.