Ordering number : EN5251A

SANYO Semiconductors
DATA SHEET

N-Channel Silicon MOSFET

2SK2406 — General-Purpose Switching Device Applications

Features

- Low ON-resistance.
- Ultrahigh-speed switching.
- High-speed diode.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		450	V
Gate-to-Source Voltage	V_{GSS}		±30	V
Drain Current (DC)	I_D		1	A
Drain Current (Pulse)	I_{DP}	PW≤10μs, duty cycle≤1%	4	A
Allowable Power Dissipation	P_D		1	W
		Tc=25°C	30	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		−55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	I_D=1mA, V_{GS}=0V	450			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=450V, V_{GS}=0V			1	mA
Gate-to-Source Leakage Current	I_{GSS}	V_{GS}=±30V, V_{DS}=0V			±100	nA
Cutoff Voltage	$V_{GS}(off)$	V_{DS}=10V, I_D=1mA	2.0		3.0	V
Forward Transfer Admittance	$\|yfs\|$	V_{DS}=10V, I_D=0.5A	0.4	0.8		S
Static Drain-to-Source On-State Resistance	$R_{DS}(on)$	I_D=0.5A, V_{GS}=10V		3.5	4.5	Ω

Continued on next page.

SANYO Semiconductor Co., Ltd.
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

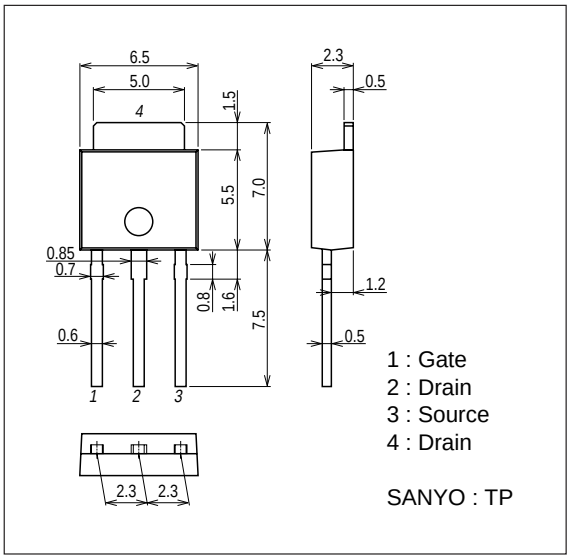
Continued from preceding page.

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	V_{DS}=20V, f=1MHz		300		pF
Output Capacitance	Coss	V_{DS}=20V, f=1MHz		40		pF
Reverse Transfer Capacitance	Crss	V_{DS}=20V, f=1MHz		8		pF
Turn-ON Delay Time	t_{d}(on)	See specified Test Circuit.		10		ns
Rise Time	t_{r}	See specified Test Circuit.		9		ns
Turn-OFF Delay Time	t_{d}(off)	See specified Test Circuit.		60		ns
Fall Time	t_{f}	See specified Test Circuit.		50		ns
Diode Forward Voltage	V_{SD}	I_{S}=1A, V_{GS}=0V		0.8	1.2	V
Diode Reverse Time	t_{rr}	I_{S}=1A, di/dt=100A/μs		80	120	ns

Package Dimensions

unit : mm (typ)

7518-004



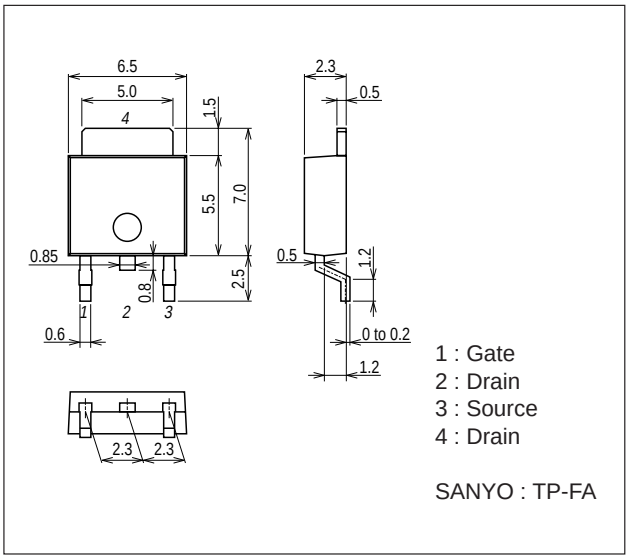
1 : Gate
2 : Drain
3 : Source
4 : Drain

SANYO : TP

Package Dimensions

unit : mm (typ)

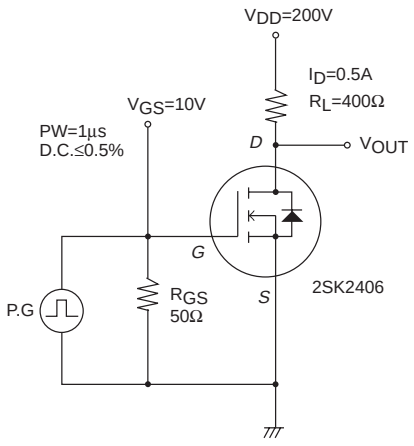
7003-004

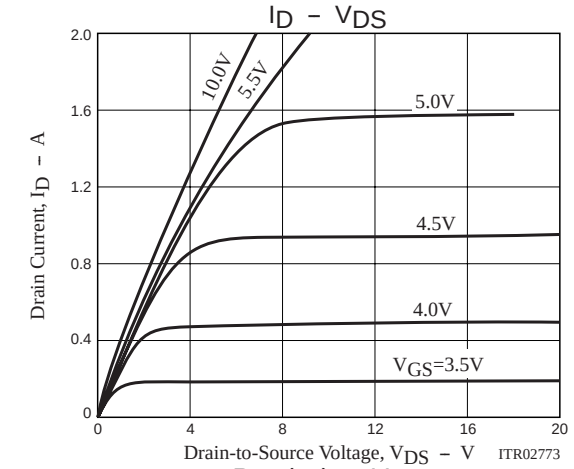


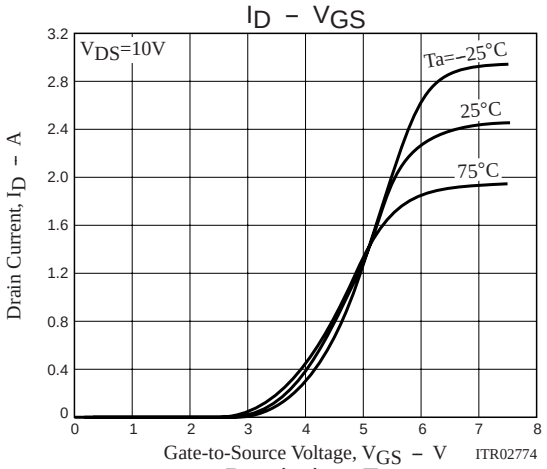
1 : Gate
2 : Drain
3 : Source
4 : Drain

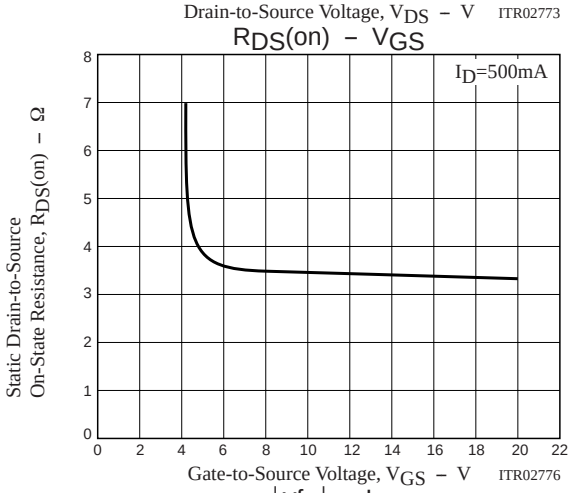
SANYO : TP-FA

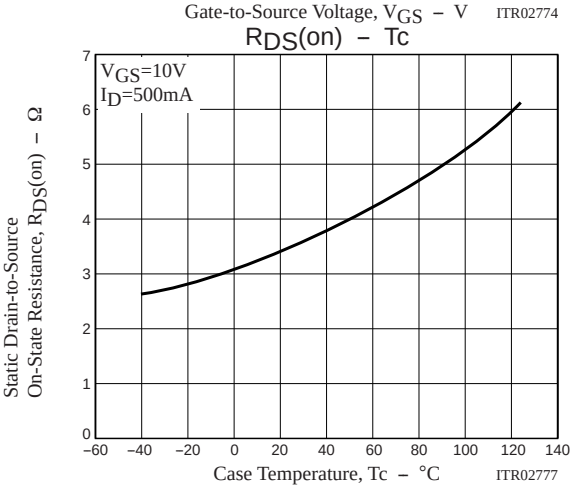
Switching Time Test Circuit

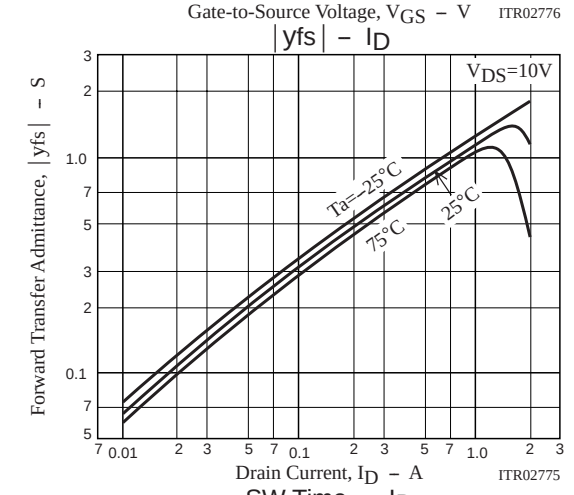


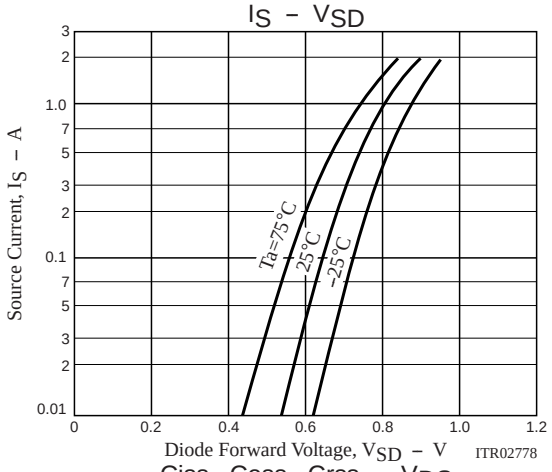


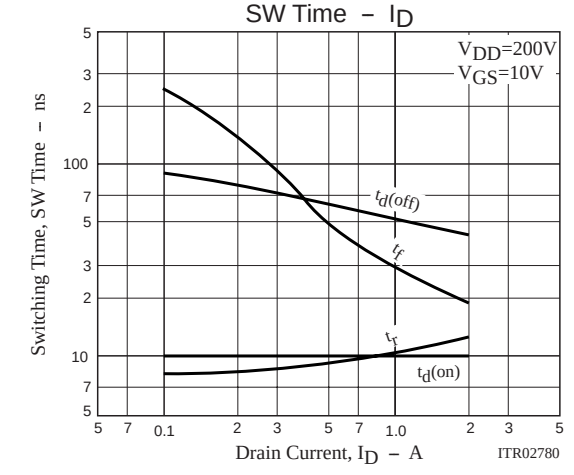


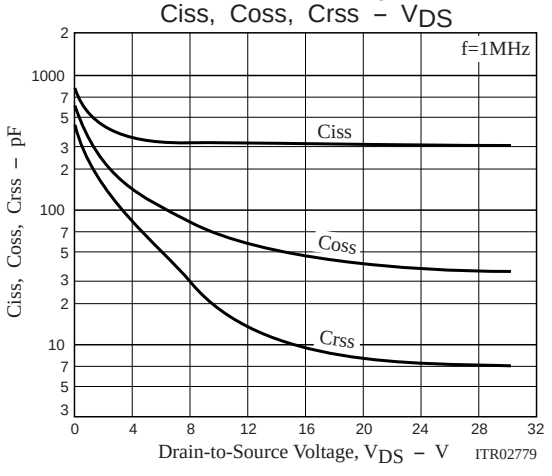


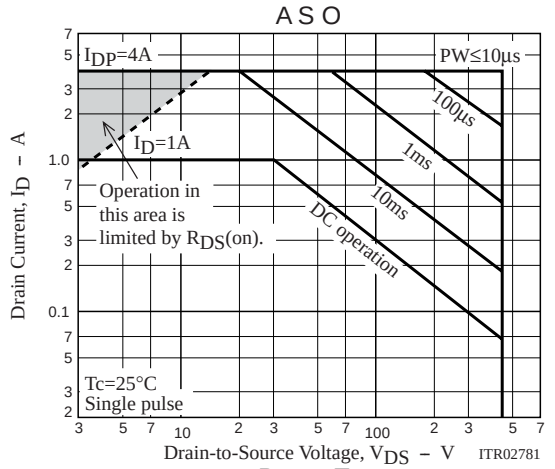


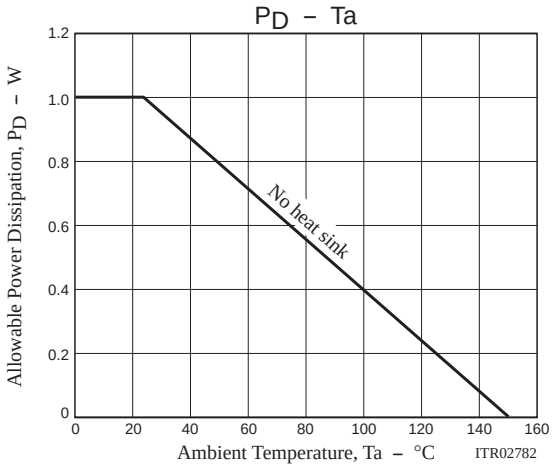


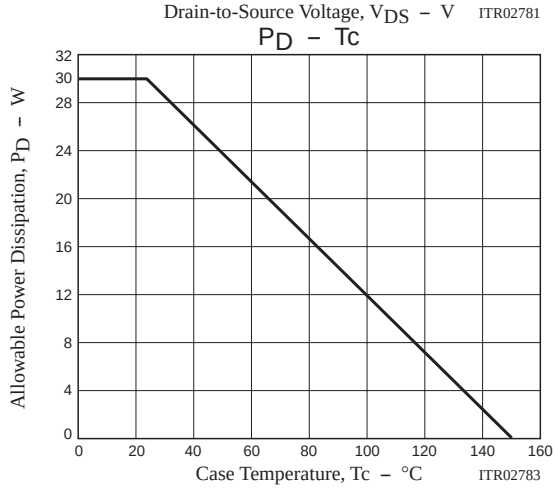












Note on usage : Since the 2SK2406 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.