Ordering number:ENN5366A

P-Channel Silicon MOSFET

2SJ413

Ultrahigh-Speed Switching Applications

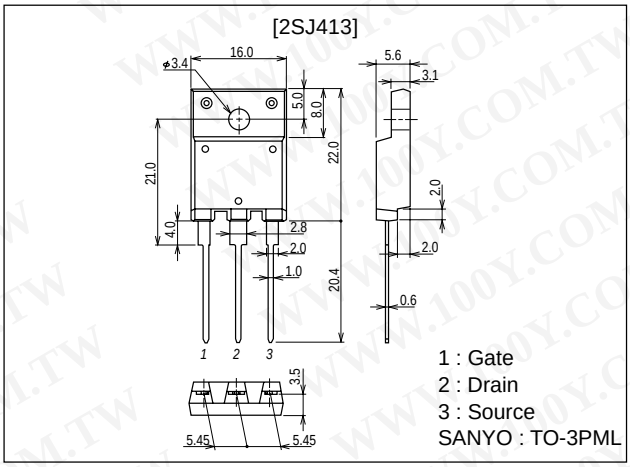
Features

- Low ON resistance.
- Ultrahigh-speed switching.
- Low-voltage drive.
- Micaless package facilitating mounting.

Package Dimensions

unit:mm

2076B



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}		±20	V
Drain Current (DC)	I_D		–50	A
Drain Current (Pulse)	I_{DP}	PW≤10μs, duty cycle≤1%	–200	A
Allowable Power Dissipation	P_D		3.0	W
		Tc=25˚C	70	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}=0	–60			V
Gate-to-Source Breakdown Voltage	$V_{(BR)GSS}$	I_G=±100μA, V_{DS}=0	±20			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=–60V, V_{GS}=0			–100	μA
Gate-to-Source Leakage Current	I_{GSS}	V_{GS}=±16V, V_{DS}=0			±10	μA
Cutoff Voltage	$V_{GS}(off)$	V_{DS}=–10V, I_D=–1mA	–1.0		–2.0	V
Forward Transfer Admittance	| yfs |	V_{DS}=–10V, I_D=–25A	27	45		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)}1$	I_D=–25A, V_{GS}=–10V		15	20	mΩ
	$R_{DS(on)}2$	I_D=–25A, V_{GS}=–4V		20	30	mΩ

Marking : JE

Continued on next page.

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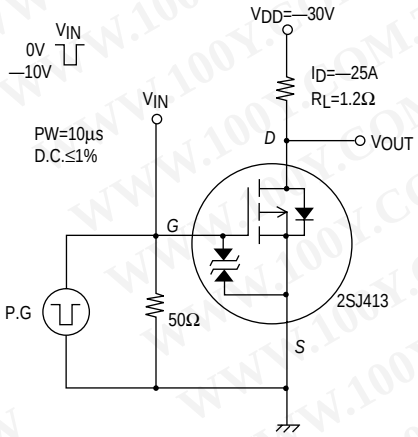
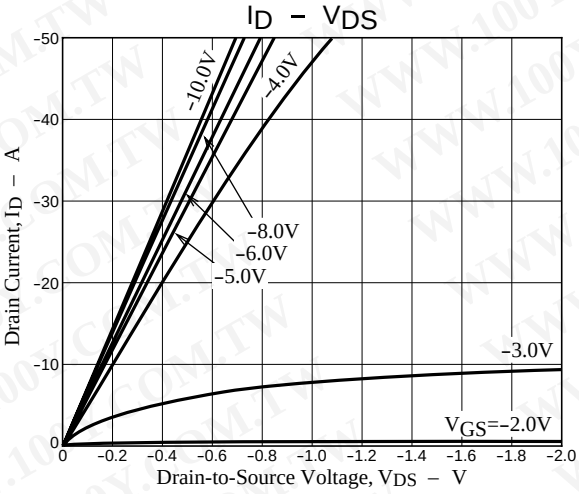
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

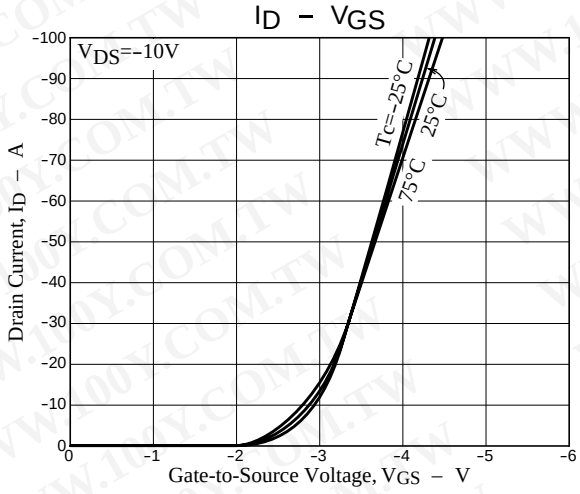
Continued from preceding page.

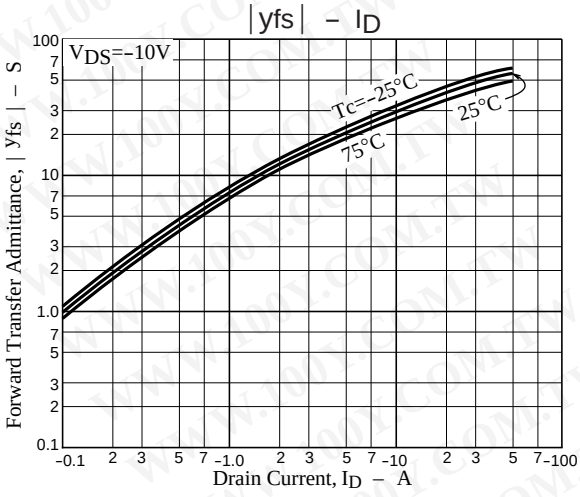
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	V_{DS}=–20V, f=1MHz		7600		pF
Output Capacitance	Coss	V_{DS}=–20V, f=1MHz		2400		pF
Reverse Transfer Capacitance	Crss	V_{DS}=–20V, f=1MHz		600		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		60		ns
Rise Time	t_r	See specified Test Circuit		250		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		900		ns
Fall Time	t_f	See specified Test Circuit		350		ns
Diode Forward Voltage	V_{SD}	I_S=–50A, V_{GS}=0		–1.0	–1.5	V

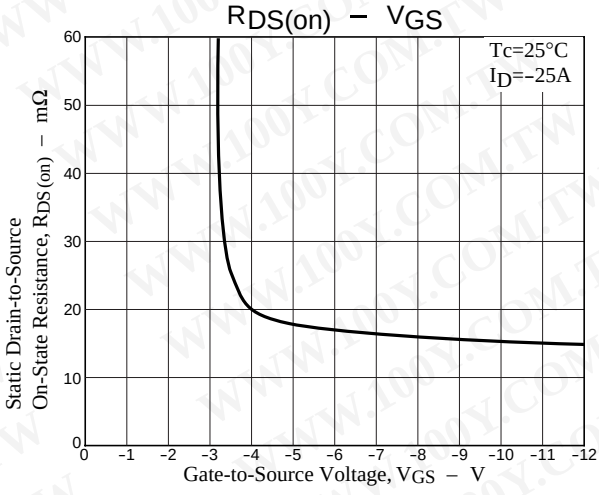
Switching Time Test Circuit



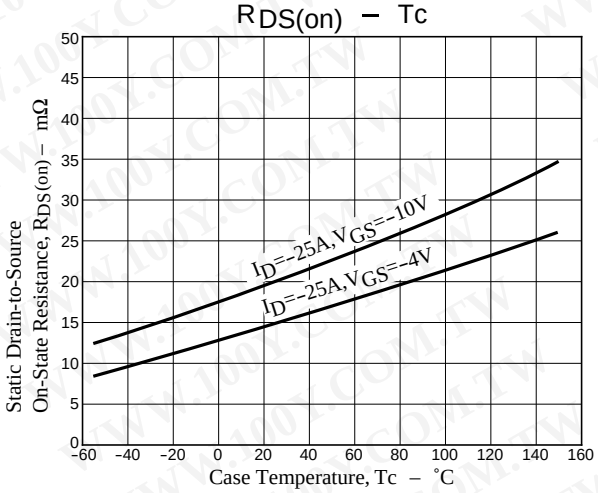




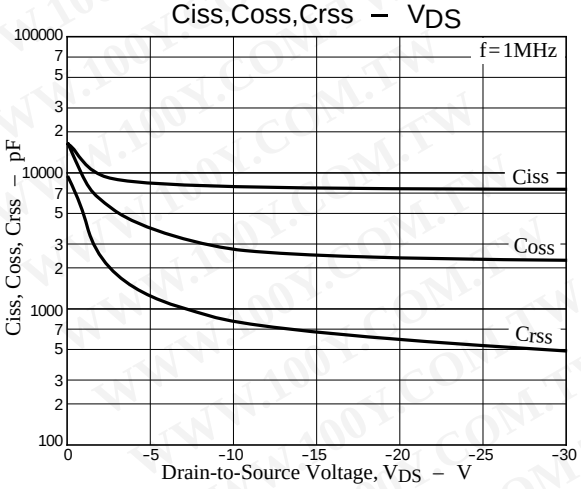




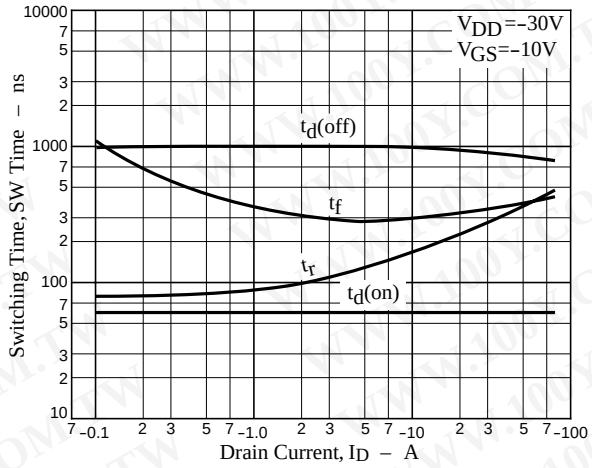
$R_{DS(on)}$ – Tc



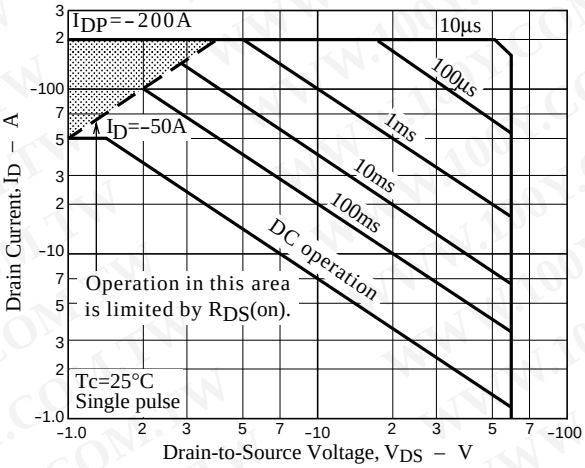
Ciss,Coss,Crss – V_{DS}



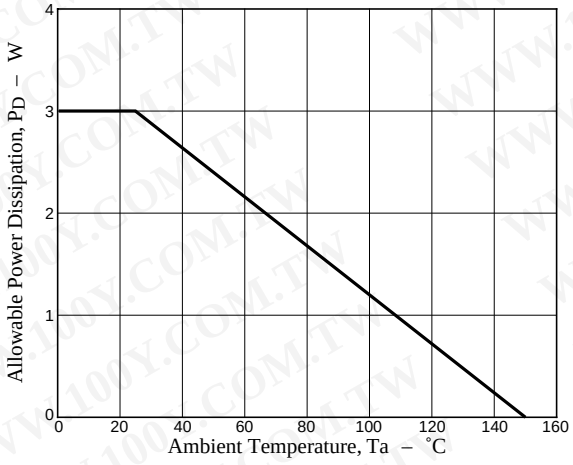
SW Time – I_D



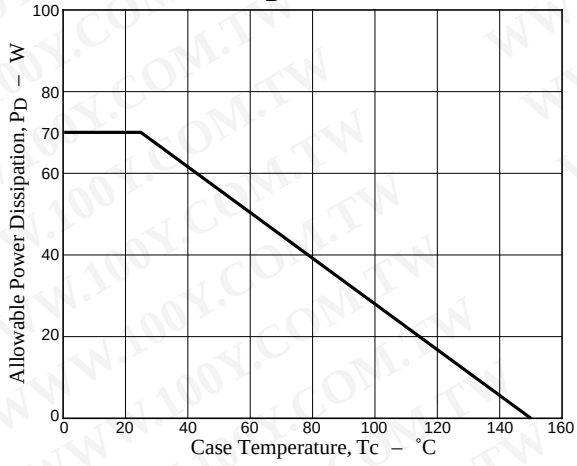
A S O



P_D – Ta



P_D – Tc



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