Ordering number: EN5064A

SANYO

No.5064A

2SJ420

P-Channel Silicon MOSFET

Ultrahigh-Speed Switching Applications

Features

- Low ON resistance.
- Ultrahigh-speed switching.
- 2.5V drive.

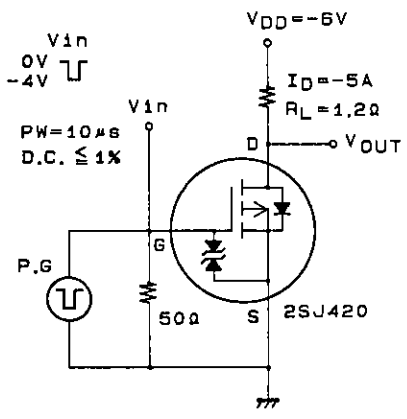
Absolute Maximum Ratings at Ta = 25°C

				unit
Drain-to-Source Voltage	V_{DSS}		−12	V
Gate-to-Source Voltage	V_{GSS}		±10	V
Drain Current (DC)	I_D		−5	A
Drain Current (Pulse)	I_{DP}	PW≦10μs, duty cycle≦1%	−32	A
Allowable Power Dissipation	P_D	Mounted on a ceramic board (1000mm²×0.8mm)	2.0	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		−55 to +150	°C

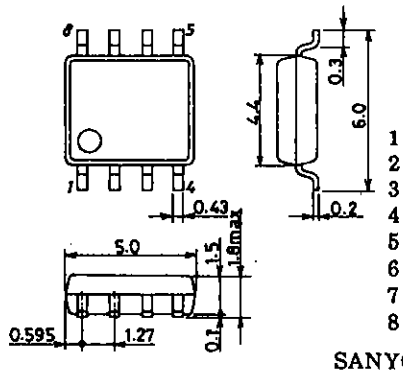
Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	I_D = −1mA, V_{GS} = 0	−12			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS} = −10V, V_{GS} = 0			−100	μA
Gate-to-Source Leakage Current	I_{GSS}	V_{GS} = ±8V, V_{DS} = 0			±10	μA
Cutoff Voltage	$V_{GS(off)}$	V_{DS} = −6V, I_D = −1mA	−0.4		−1.4	V
Forward Transfer Admittance	$\|y_{fs}\|$	V_{DS} = −6V, I_D = −5A	8	12		S
Static Drain-to-Source ON-State Resistance	$R_{DS(on)}1$	I_D = −5A, V_{GS} = −4V		50	63	mΩ
	$R_{DS(on)}2$	I_D = −2A, V_{GS} = −2.5V		70	108	mΩ
Input Capacitance	Ciss	V_{DS} = −6V, f = 1MHz		1200		pF
Output Capacitance	Coss	V_{DS} = −6V, f = 1MHz		1100		pF
Reverse Transfer Capacitance	Crss	V_{DS} = −6V, f = 1MHz		400		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		25		ns
Rise Time	t_r	//		150		ns
Turn-OFF Delay Time	$t_{d(off)}$	//		150		ns
Fall Time	t_f	//		180		ns
Diode Forward Voltage	V_{SD}	I_S = −5A, V_{GS} = 0		−1.0	−1.2	V

Switching Time Test Circuit



Package Dimensions 2116
(unit : mm)



1 : Source
2 : Source
3 : Source
4 : Gate
5 : Drain
6 : Drain
7 : Drain
8 : Drain

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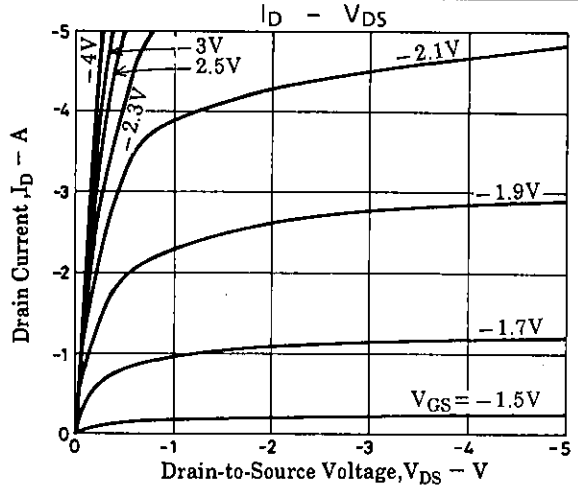
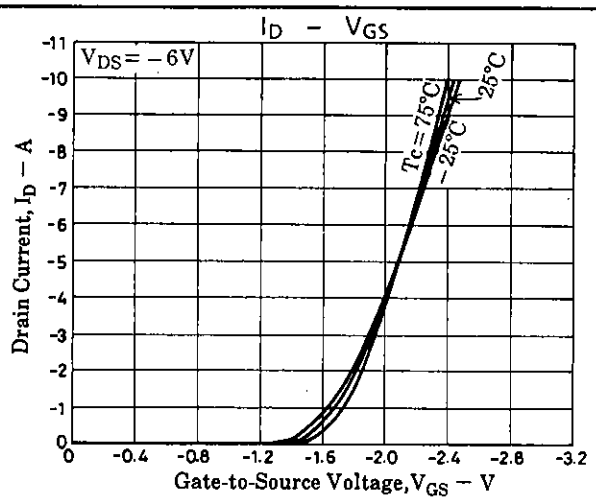
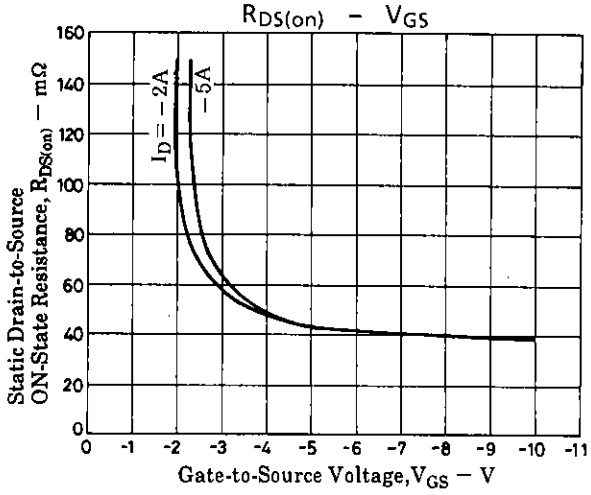
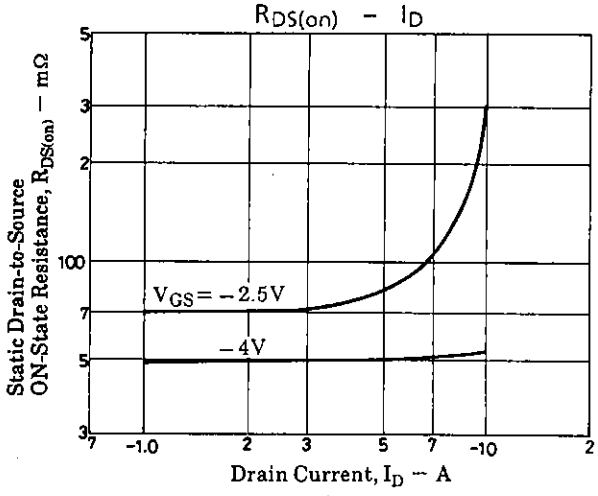
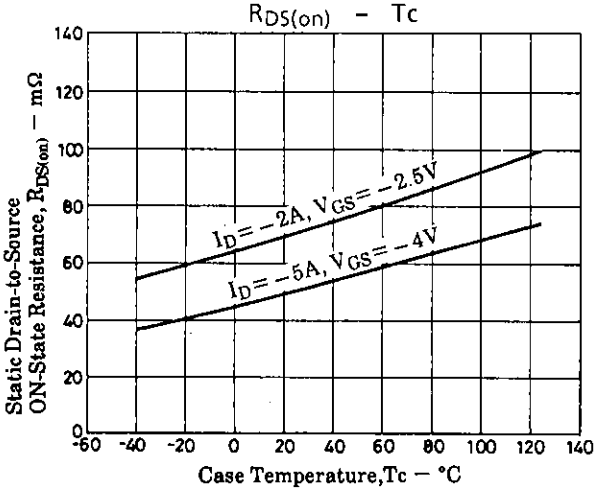
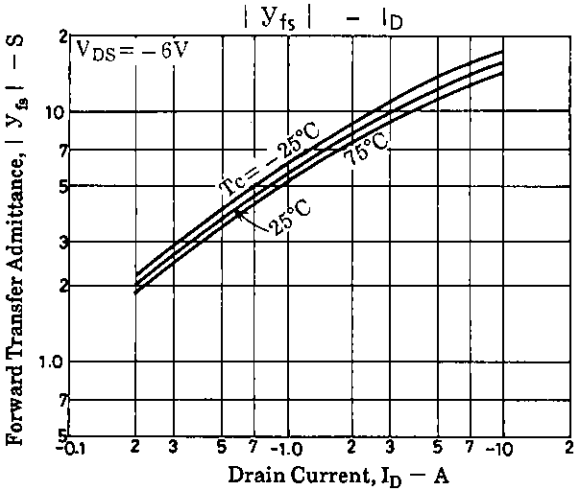

I_D – V_{DS}
Drain Current, I_D – A
Drain-to-Source Voltage, V_{DS} – V
–4V
–3V
–2.5V
–2.3V
–2.1V
–1.9V
–1.7V
V_{GS} = –1.5V

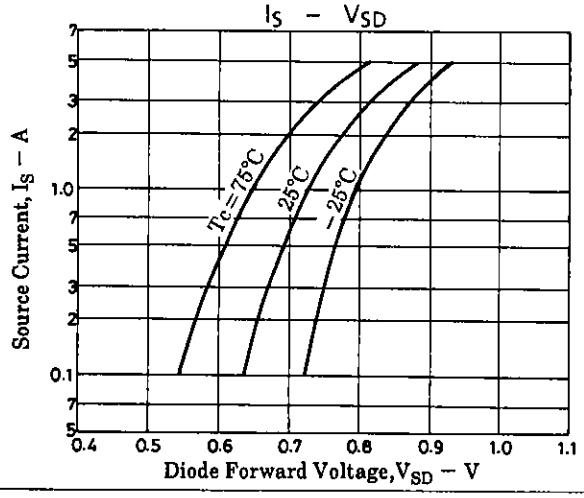

I_D – V_{GS}
V_{DS} = –6V
Drain Current, I_D – A
Gate-to-Source Voltage, V_{GS} – V
Tc = 75°C
25°C
–25°C

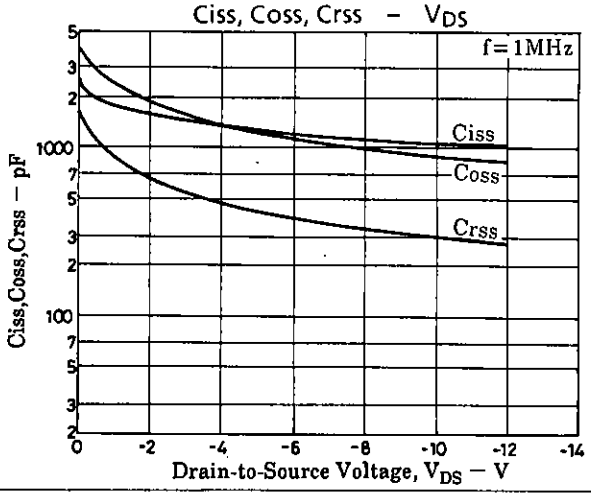

$R_{DS(on)}$ – V_{GS}
Static Drain-to-Source ON-State Resistance, $R_{DS(on)}$ – mΩ
Gate-to-Source Voltage, V_{GS} – V
I_D = –2A
–5A


$R_{DS(on)}$ – I_D
Static Drain-to-Source ON-State Resistance, $R_{DS(on)}$ – mΩ
Drain Current, I_D – A
V_{GS} = –2.5V
–4V


$R_{DS(on)}$ – Tc
Static Drain-to-Source ON-State Resistance, $R_{DS(on)}$ – mΩ
Case Temperature, Tc – °C
I_D = –2A, V_{GS} = –2.5V
I_D = –5A, V_{GS} = –4V


$|y_{fs}|$ – I_D
Forward Transfer Admittance, $|y_{fs}|$ – S
Drain Current, I_D – A
V_{DS} = –6V
Tc = –25°C
75°C
25°C


I_S – V_{SD}
Source Current, I_S – A
Diode Forward Voltage, V_{SD} – V
Tc = 75°C
25°C
–25°C


Ciss, Coss, Crss – V_{DS}
f = 1MHz
Ciss, Coss, Crss – pF
Drain-to-Source Voltage, V_{DS} – V
Ciss
Coss
Crss