Ordering number: EN4317

SANYO

No.4317

2SJ307

P-Channel MOS Silicon FET

Very High-Speed Switching Applications

Features

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

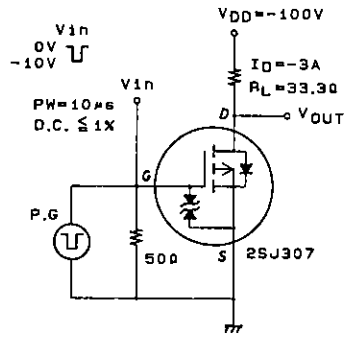
Absolute Maximum Ratings at Ta = 25°C

				unit
Drain to Source Voltage	V_{DSS}		−250	V
Gate to Source Voltage	V_{GSS}		±30	V
Drain Current(DC)	I_D		−6	A
Drain Current(Pulse)	I_{DP}	PW≦10μs, duty cycle≦1%	−24	A
Allowable Power Dissipation	P_D		2.0	W
		Tc = 25°C	30	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		−55 to +150	°C

Electrical Characteristics at Ta = 25°C

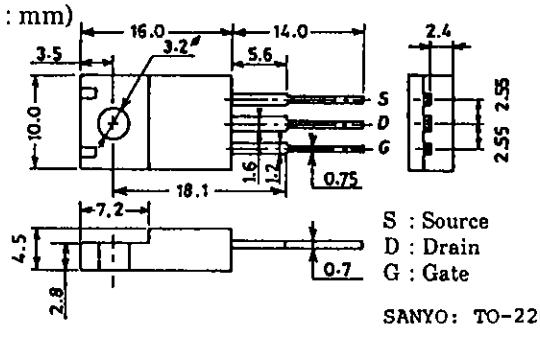
			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	I_D = −1mA, V_{GS} = 0	−250			V
G-S Breakdown Voltage	$V_{(BR)GSS}$	I_G = ±100μA, V_{DS} = 0	±30			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = −250V, V_{GS} = 0			−100	μA
Gate to Source Leakage Current	I_{GSS}	V_{GS} = ±25V, V_{DS} = 0			±10	μA
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 = −3A	3	5		S
Static Drain to Source on State Resistance	$R_{DS(on)}$	I_D = −3A, V_{GS} = −10V		0.75	1.0	Ω
Input Capacitance	Ciss	V_{DS} = −20V, f = 1MHz		1250		pF
Output Capacitance	Coss	V_{DS} = −20V, f = 1MHz		235		pF
Reverse Transfer Capacitance	Crss	V_{DS} = −20V, f = 1MHz		105		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		24		ns
Rise Time	t_r	〃		37		ns
Turn-OFF Delay Time	$t_{d(off)}$	〃		155		ns
Fall Time	t_f	〃		130		ns
Diode Forward Voltage	V_{SD}	I_S = −6A, V_{GS} = 0		−1.0	−1.5	V

Switching Time Test Circuit



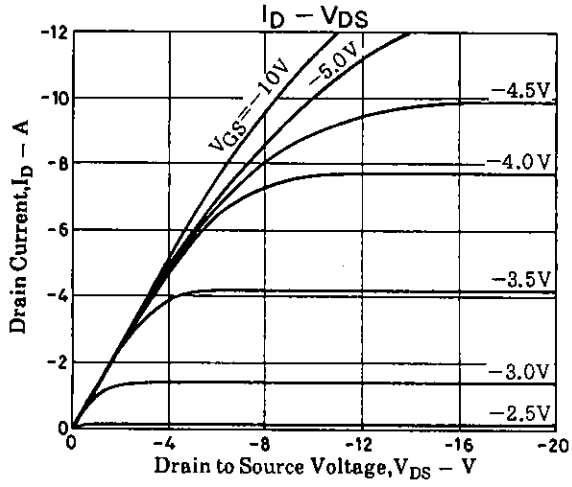
Package Dimensions 2063

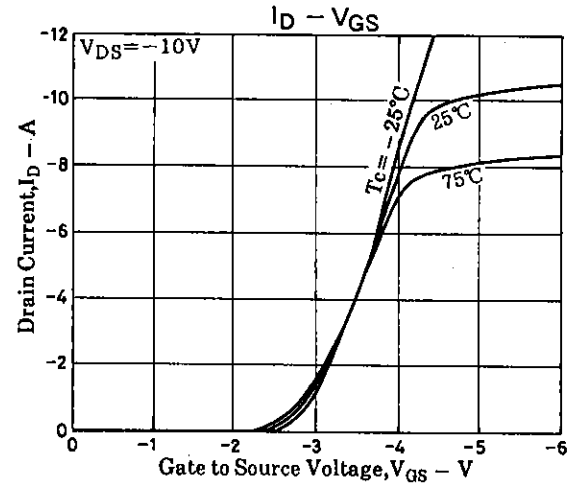
(unit : mm)

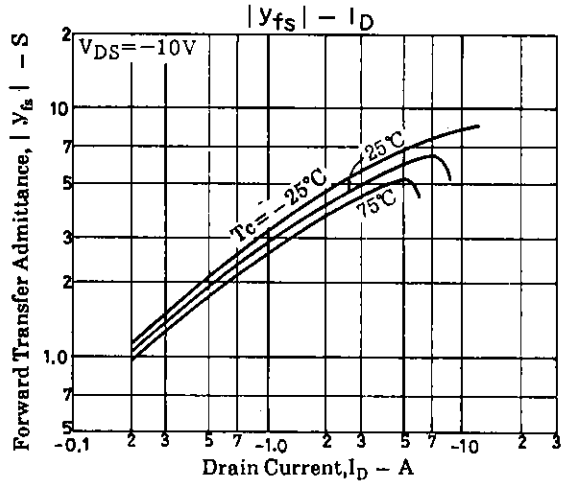


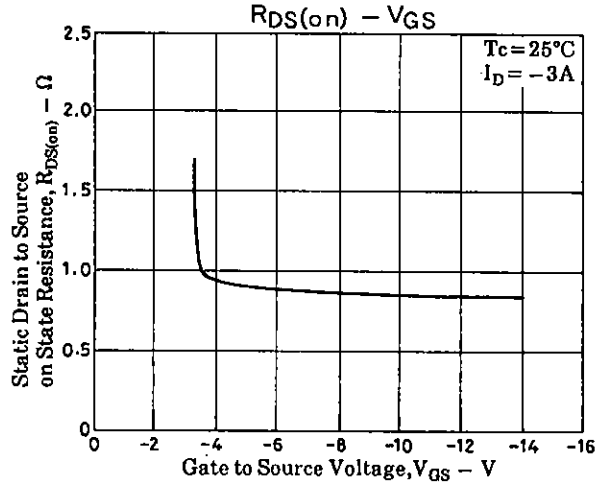
SANYO: TO-220ML

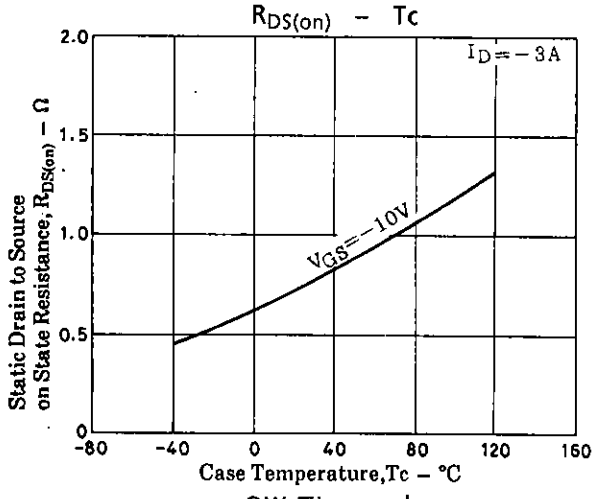
SANYO Electric Co.,Ltd. Semiconductor Business Headquarters
TOKYO OFFICE Tokyo Bldg., 1-10,1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

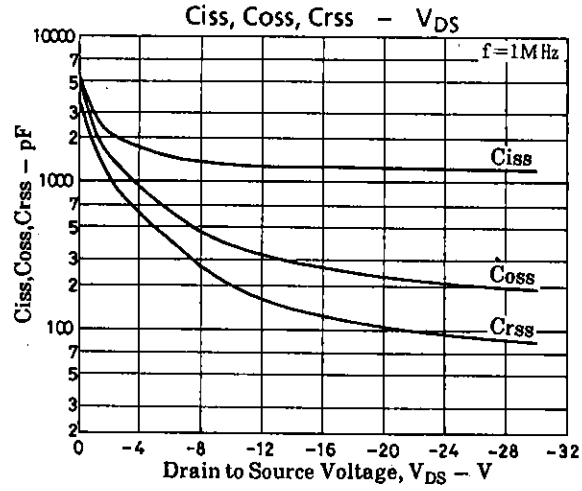

$I_D - V_{DS}$
Drain Current, I_D – A
Drain to Source Voltage, V_{DS} – V
V_{GS}=–10V
–5.0V
–4.5V
–4.0V
–3.5V
–3.0V
–2.5V

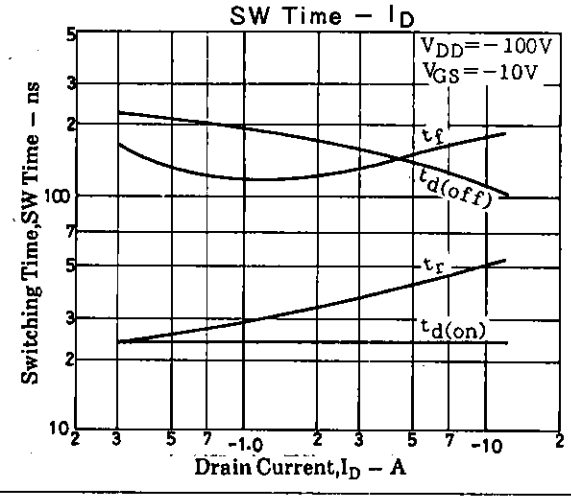

$I_D - V_{GS}$
V_{DS}=–10V
Drain Current, I_D – A
Gate to Source Voltage, V_{GS} – V
Tc=–25°C
25°C
75°C

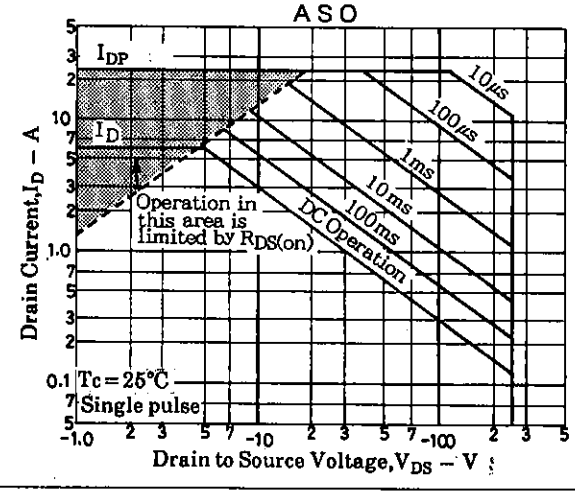

$|y_{fs}| - I_D$
V_{DS}=–10V
Forward Transfer Admittance, $|y_{fs}|$ – S
Drain Current, I_D – A
Tc=–25°C
25°C
75°C

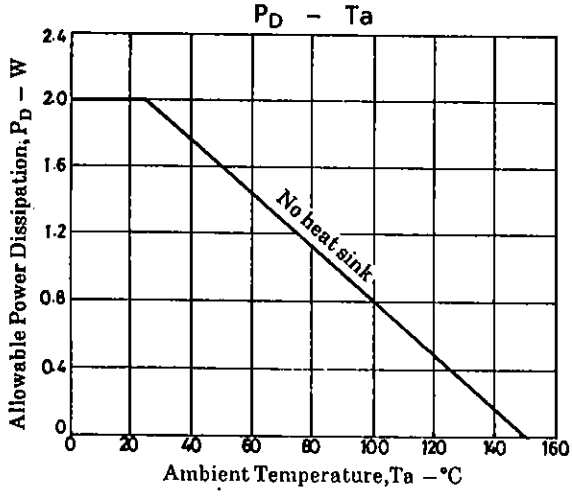

$R_{DS(on)} - V_{GS}$
Tc=25°C
I_D=–3A
Static Drain to Source on State Resistance, $R_{DS(on)}$ – Ω
Gate to Source Voltage, V_{GS} – V

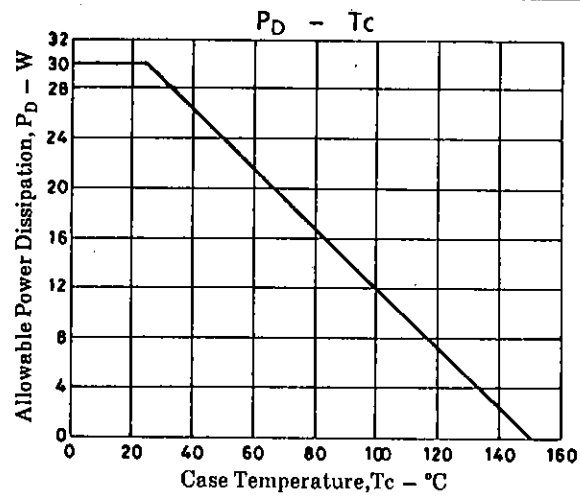

$R_{DS(on)}$ – Tc
I_D=–3A
V_{GS}=–10V
Static Drain to Source on State Resistance, $R_{DS(on)}$ – Ω
Case Temperature, Tc – °C


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


SW Time – I_D
V_{DD}=–100V
V_{GS}=–10V
t_f
$t_{d(off)}$
t_r
$t_{d(on)}$
Switching Time, SW Time – ns
Drain Current, I_D – A


ASO
I_{DP}
I_D
10μs
100μs
1ms
10ms
100ms
DC Operation
Operation in this area is limited by $R_{DS(on)}$
Tc=25°C
Single pulse
Drain Current, I_D – A
Drain to Source Voltage, V_{DS} – V





■ 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.