Ordering number: EN4745

SANYO

No.4745

2SJ258

P-Channel MOS Silicon FET

Very High-Speed Switching Applications

Features

- Low ON resistance.
- Very high-speed switching.
- Low-voltage drive.
- Surface mount type device making the following possible
  - Reduction in the assembling time for 2SJ258-applied equipment
  - High-density surface mount applications
  - Small size of 2SJ258-applied equipment

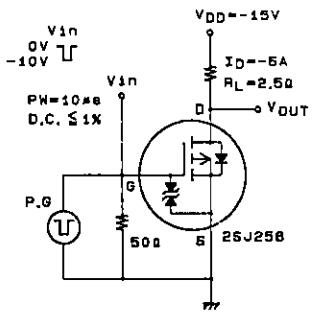
Absolute Maximum Ratings at Ta = 25°C

				unit
Drain-to-Source Voltage	V_{DSS}		−30	V
Gate-to-Source Voltage	V_{GSS}		±20	V
Drain Current(DC)	I_D		−12	A
Drain Current(Pulse)	I_{DP}	PW≦10μs, duty cycle≦1%	−48	A
Allowable Power Dissipation	P_D		1.65	W
		Tc = 25°C	60	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		−55 to +150	°C

Electrical Characteristics at Ta = 25°C

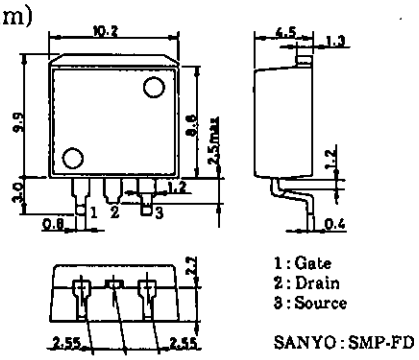
			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	I_D = −1mA, V_{GS} = 0	−30			V
G-S Breakdown Voltage	$V_{(BR)GSS}$	I_G = ±100μA, V_{DS} = 0	±20			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS} = −30V, V_{GS} = 0			−100	μA
Gate-to-Source Leakage Current	I_{GSS}	V_{GS} = ±16V, V_{DS} = 0			±10	μA
Cutoff Voltage	$V_{GS(off)}$	V_{DS} = −10V, I_D = −1mA	−1.0		−2.0	V
Forward Transfer Admittance	$\|y_{fs}\|$	V_{DS} = −10V, I_D = −6A	5	8		S
Static Drain-to-Source ON-State Resistance	$R_{DS(on)}$	I_D = −6A, V_{GS} = −10V		0.07	0.095	Ω
	$R_{DS(on)}$	I_D = −6A, V_{GS} = −4V		0.095	0.13	Ω
Input Capacitance	Ciss	V_{DS} = −10V, f = 1MHz		1300		pF
Output Capacitance	Coss	V_{DS} = −10V, f = 1MHz		780		pF
Reverse Transfer Capacitance	Crss	V_{DS} = −10V, f = 1MHz		290		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		16		ns
Rise Time	t_r	〃		60		ns
Turn-OFF Delay Time	$t_{d(off)}$	〃		300		ns
Fall Time	t_f	〃		250		ns
Diode Forward Voltage	V_{SD}	I_S = −12A, V_{GS} = 0		−1.0	−1.5	V

Switching Time Test Circuit



Package Dimensions 2090A

(unit : mm)



1 : Gate
2 : Drain
3 : Source

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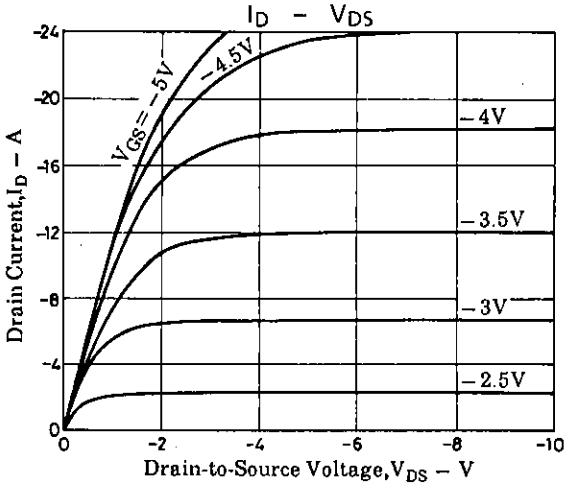
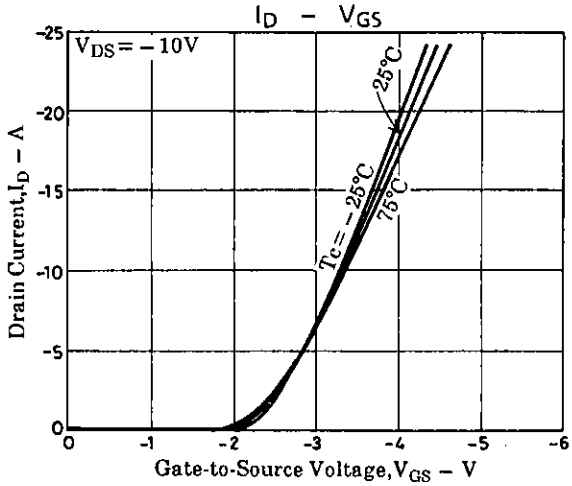
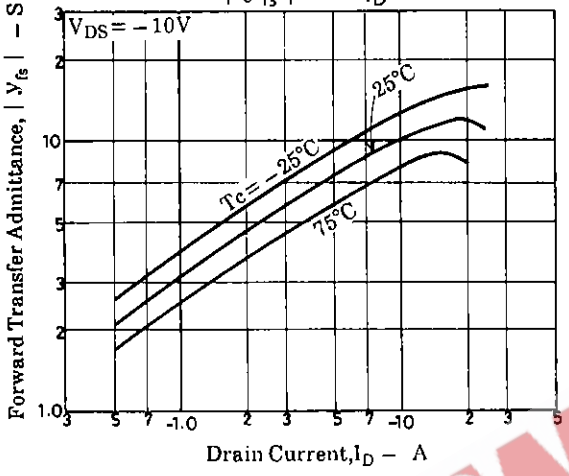
I_D – V_{DS}



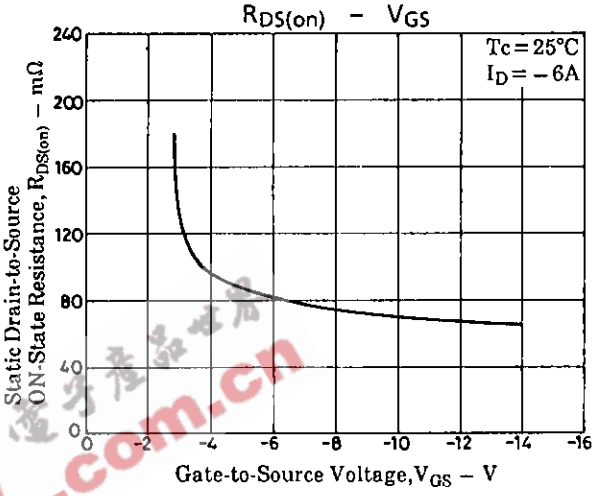
I_D – V_{GS}



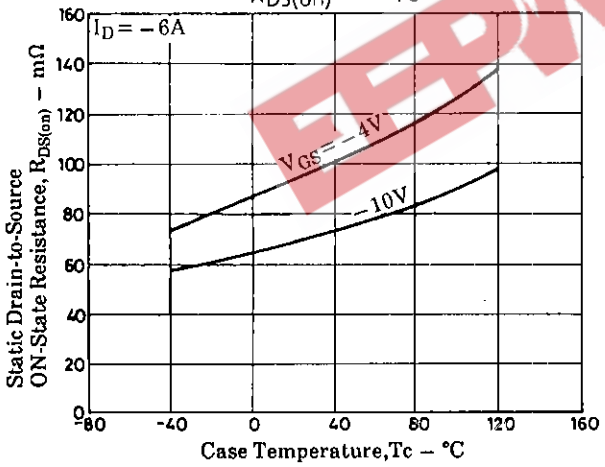
$|y_{fs}|$ – I_D



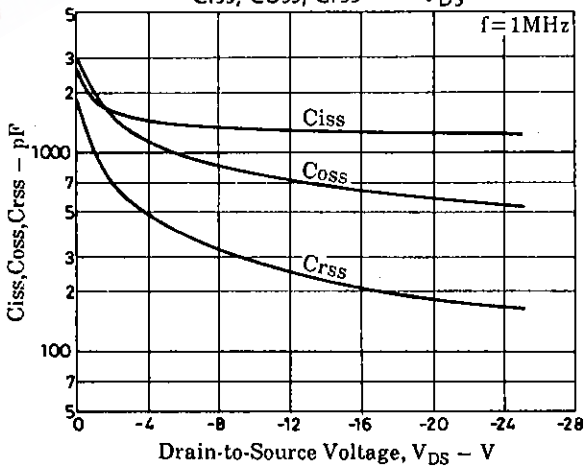
$R_{DS(on)}$ – V_{GS}



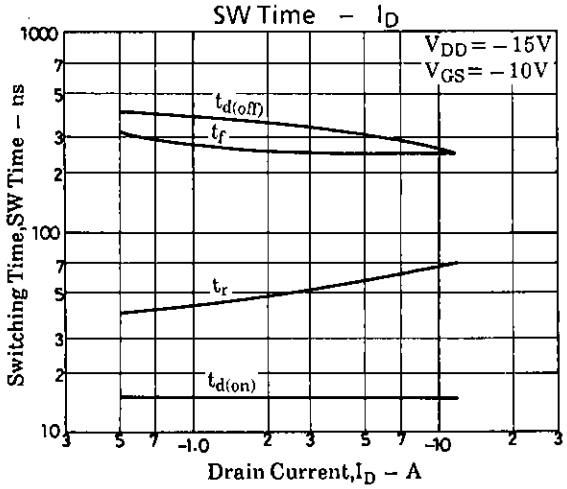
$R_{DS(on)}$ – Tc



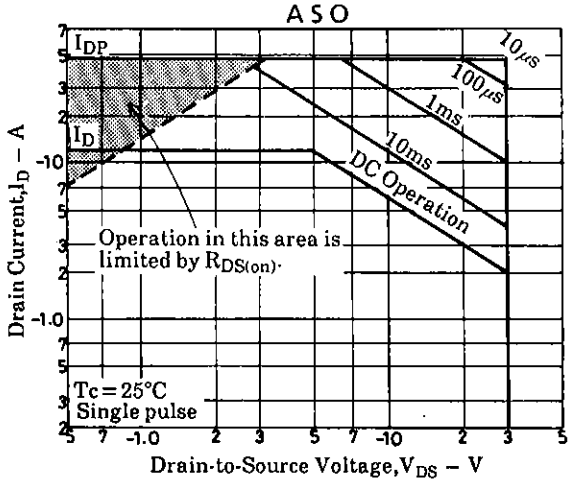
Ciss, Coss, Crss – V_{DS}



SW Time – I_D



A S O



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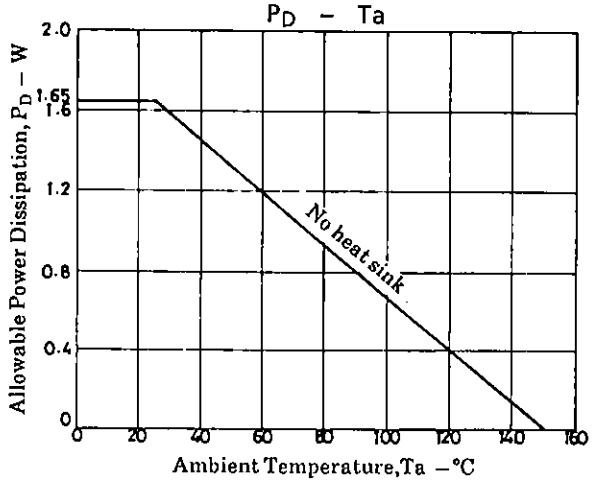

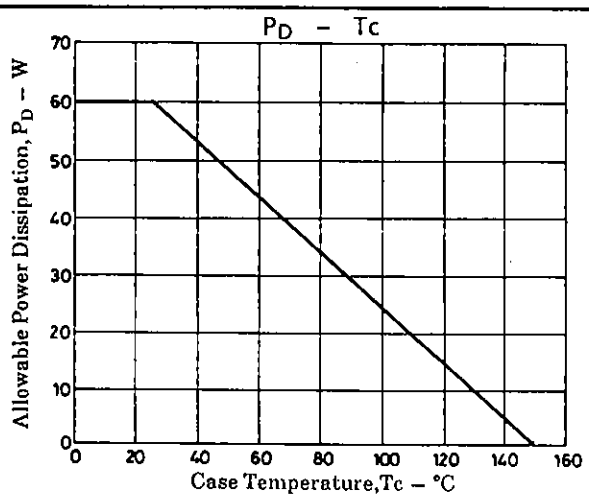

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