

	No.4241	2SJ277
		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 number of manufacturing processes for 2SJ277-applied equipment.
 - High density surface mount applications.
 - Small size of 2SJ277-applied equipment.

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

			unit
Drain to Source Voltage	V_{DS}	-100	V
Gate to Source Voltage	V_{GS}	± 15	V
Drain Current(DC)	I_D	-15	A
Drain Current(Pulse)	I_{DP}	$PW \leq 10\mu\text{s}, \text{duty cycle} \leq 1\%$	-60 A
Allowable Power Dissipation	P_D	1.65	W
		$T_c = 25^\circ\text{C}$	70 W
Channel Temperature	T_{ch}	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

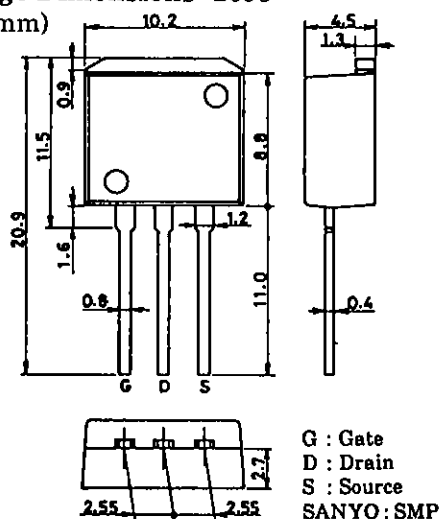
Electrical Characteristics at $T_a = 25^\circ\text{C}$

			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = -1\text{mA}, V_{GS} = 0$	-100			V
G-S Breakdown Voltage	$V_{(BR)GSS}$	$I_G = \pm 100\mu\text{A}, V_{DS} = 0$	± 15			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -100\text{V}, V_{GS} = 0$			-100	μA
Gate to Source Leakage Current	I_{GSS}	$V_{GS} = \pm 12\text{V}, V_{DS} = 0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = -10\text{V}, I_D = -1\text{mA}$	-1.0		-2.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = -10\text{V}, I_D = -8\text{A}$	7.5	13		S
Static Drain to Source on State Resistance	$R_{DS(on)}$	$I_D = -8\text{A}, V_{GS} = -10\text{V}$		120	160	$\text{m}\Omega$
	$R_{DS(on)}$	$I_D = -8\text{A}, V_{GS} = -4\text{V}$		160	220	$\text{m}\Omega$

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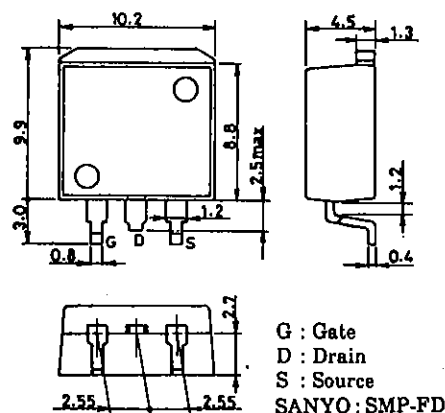
Package Dimensions 2093

(unit : mm)



Package Dimensions 2090

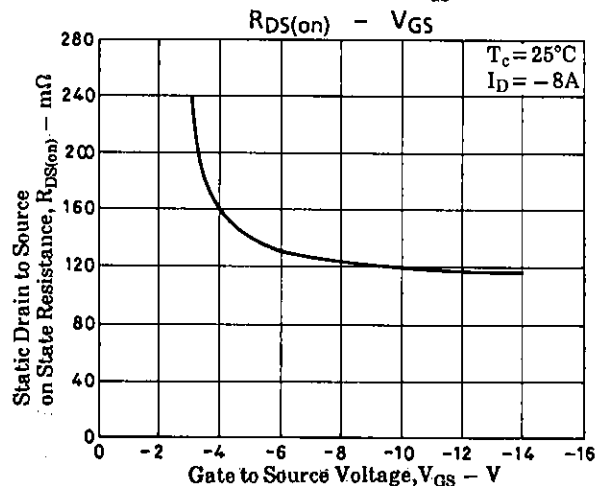
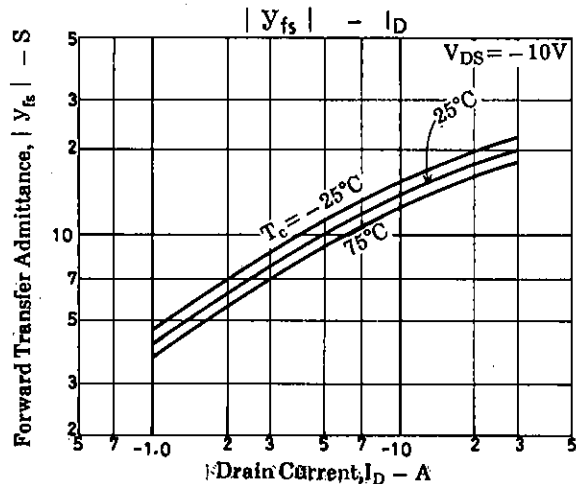
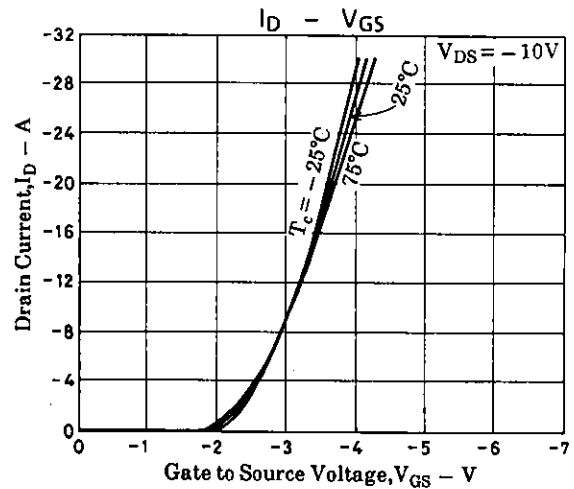
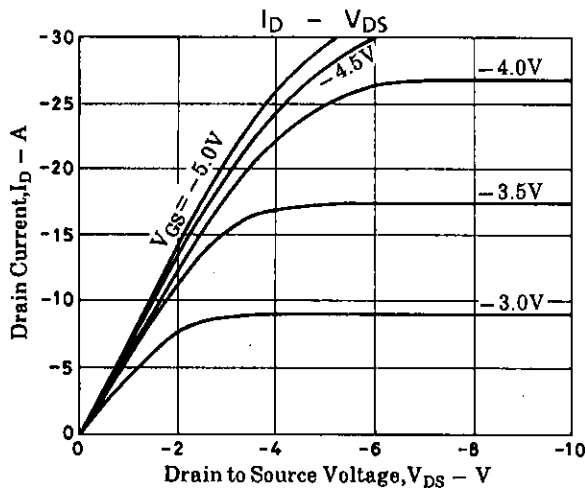
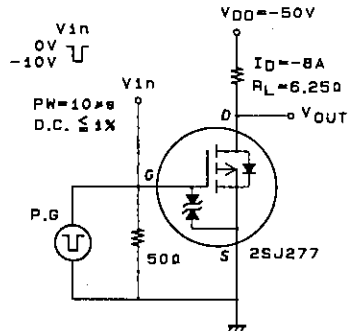
(unit : mm)

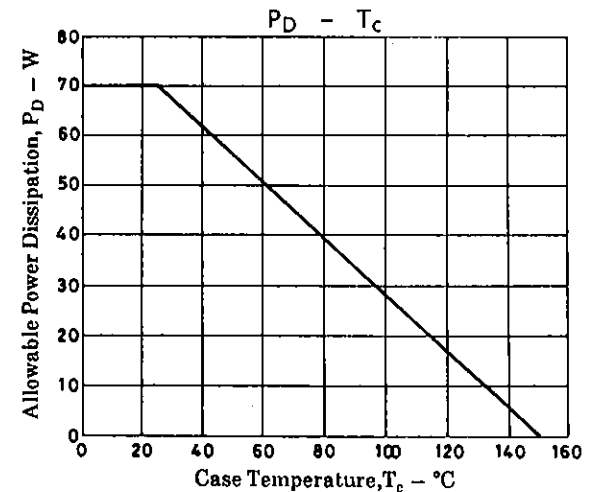
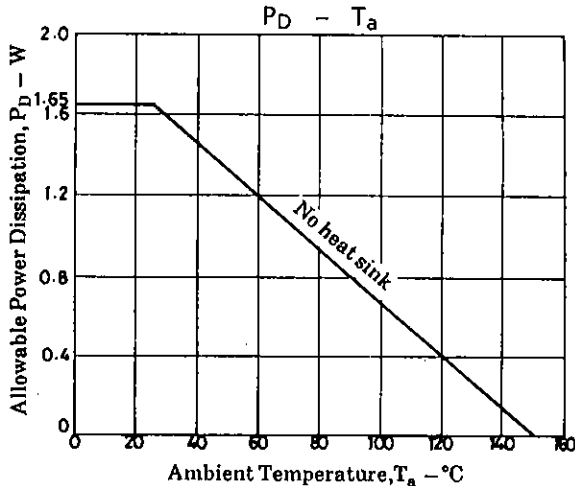
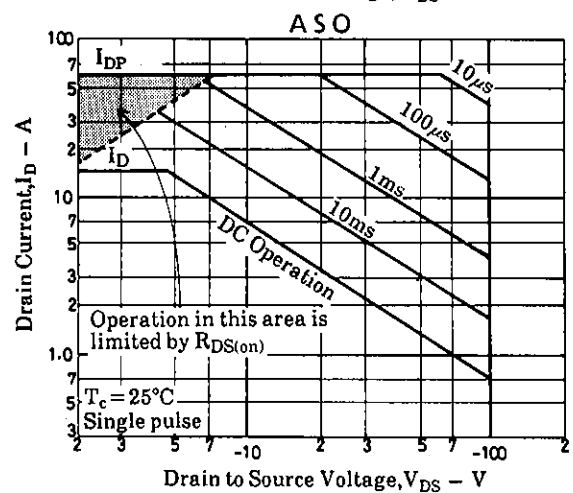
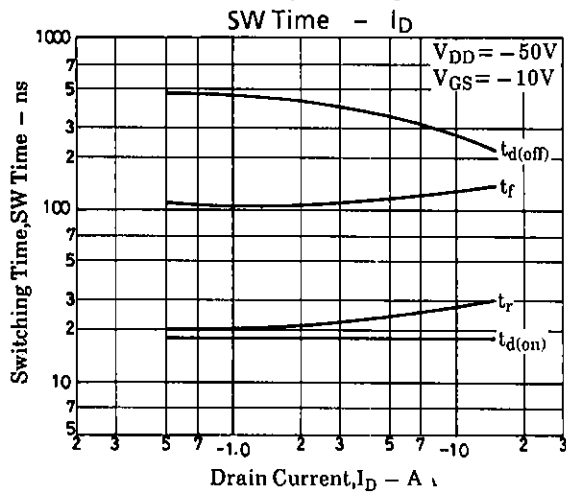
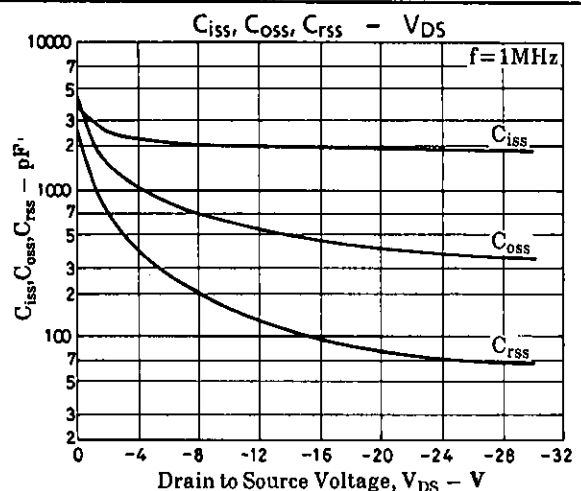
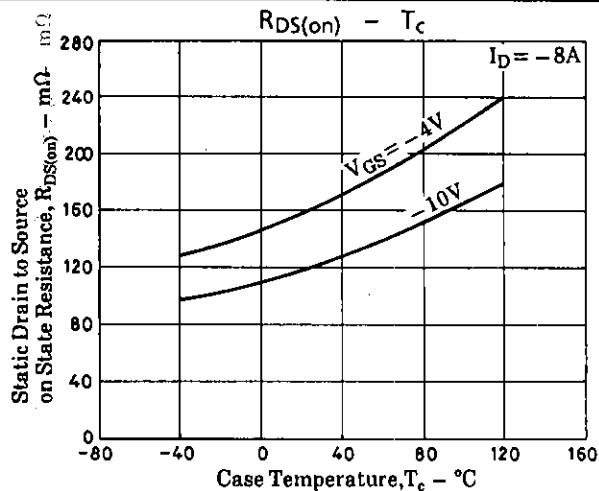


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			min	typ	max	unit
Input Capacitance	C_{iss}	$V_{DS} = -20V, f = 1MHz$		1900		pF
Output Capacitance	C_{oss}	$V_{DS} = -20V, f = 1MHz$		400		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = -20V, f = 1MHz$		80		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		18		ns
Rise Time	t_r	"		25		ns
Turn-OFF Delay Time	$t_{d(off)}$	"		300		ns
Fall Time	t_f	"		120		ns
Diode Forward Voltage	V_{SD}	$I_S = -15A, V_{GS} = 0$	-1.0	-1.5		V

Switching Time Test Circuit





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