

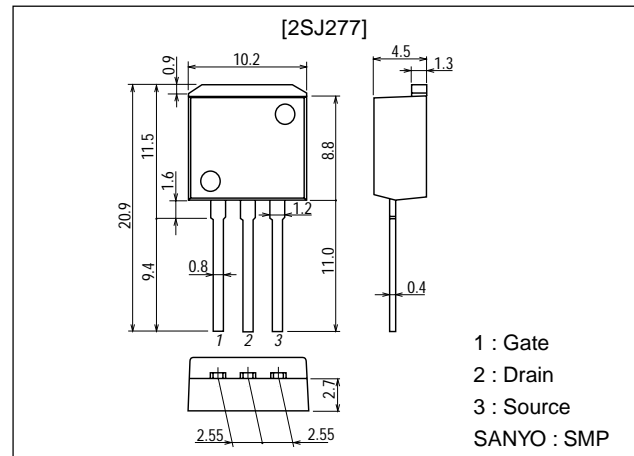
SANYO**Ultrahigh-Speed Switching Applications****Features**

- Low ON resistance.
- Ultrahigh-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.

Package Dimensions

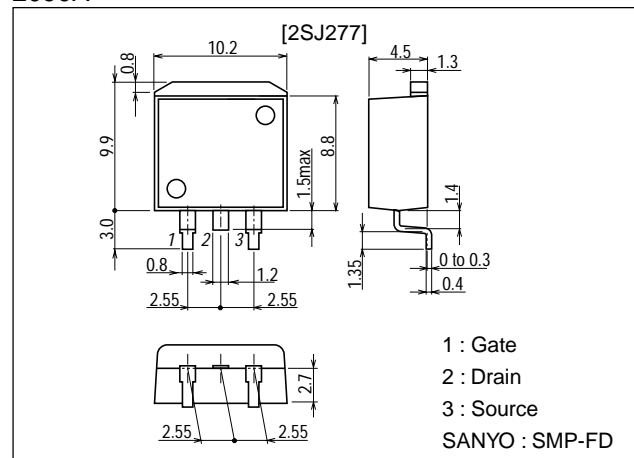
unit:mm

2093A



unit:mm

2090A



■ Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO representative nearest you before using any SANYO products described or contained herein in such applications.

■ SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

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Specifications

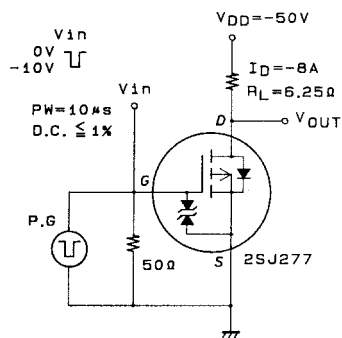
Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

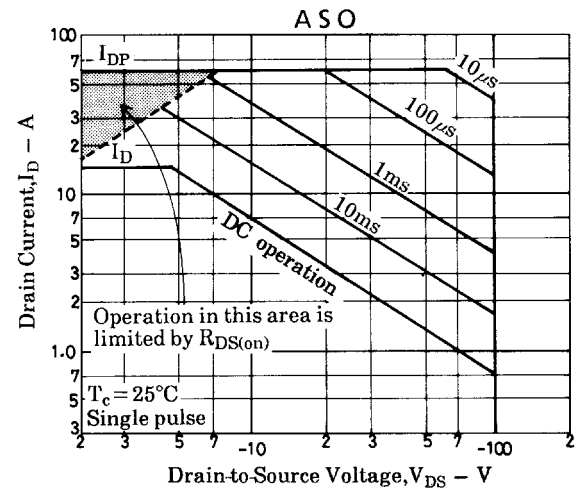
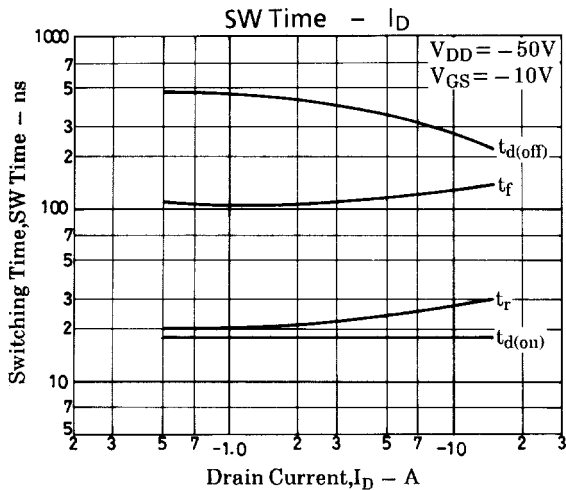
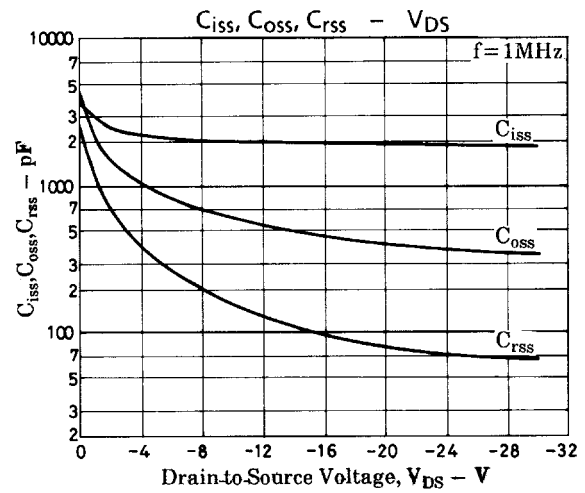
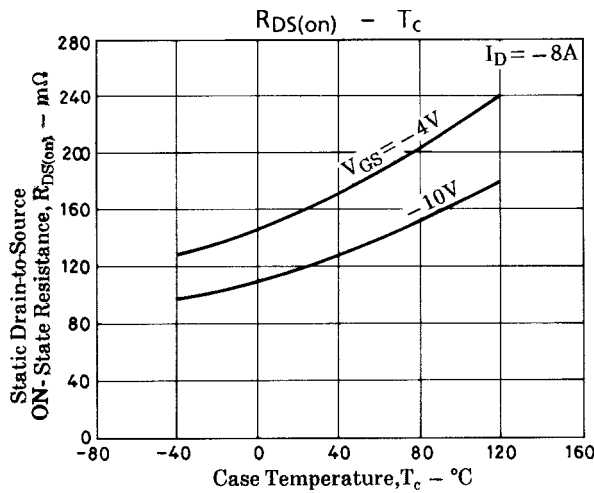
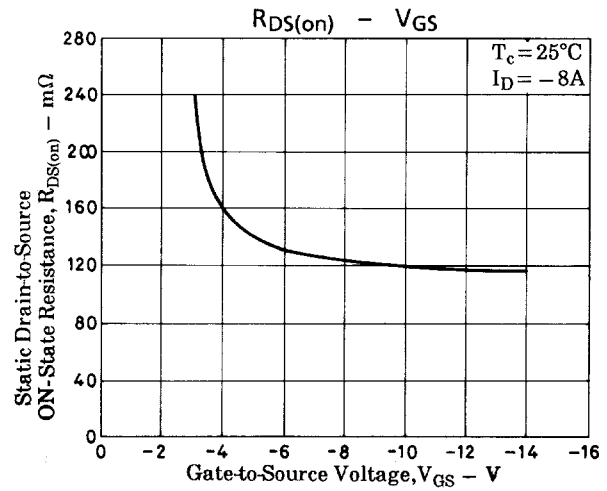
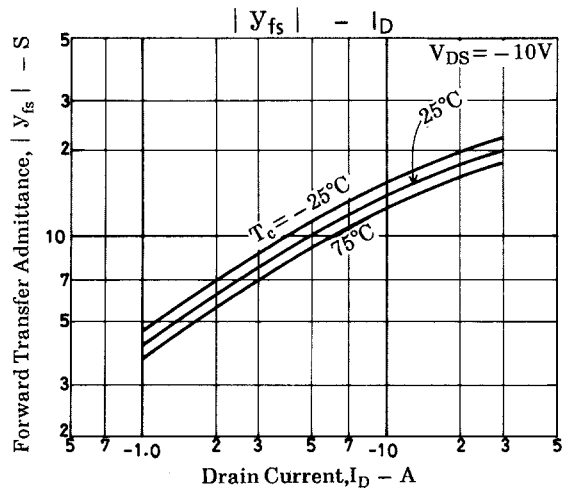
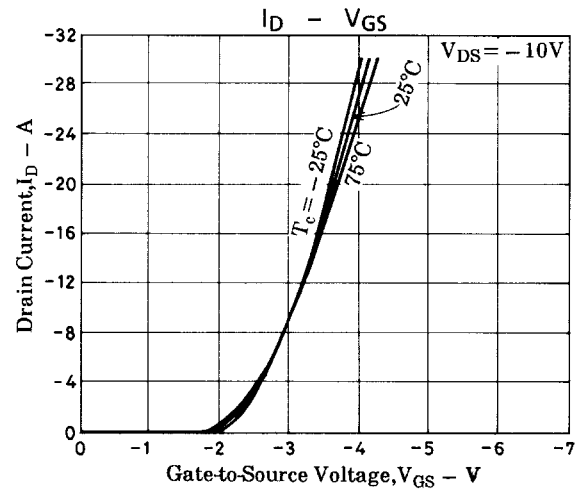
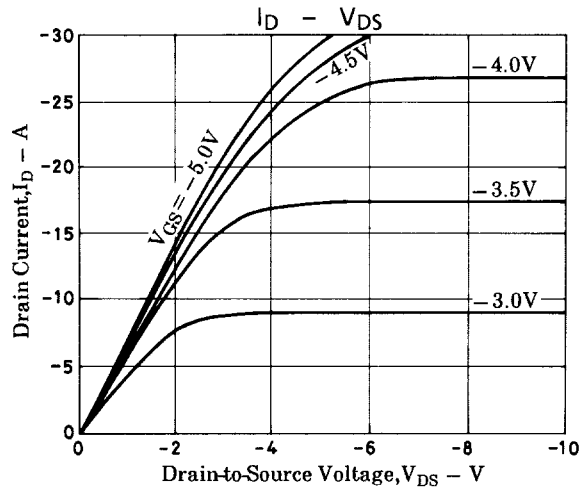
Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		-100	V
Gate-to-Source Voltage	V_{GSS}		± 15	V
Drain Current (DC)	I_D		-15	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$	-60	A
Allowable Power Dissipation	P_D		1.65	W
		$T_c = 25^\circ\text{C}$	70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

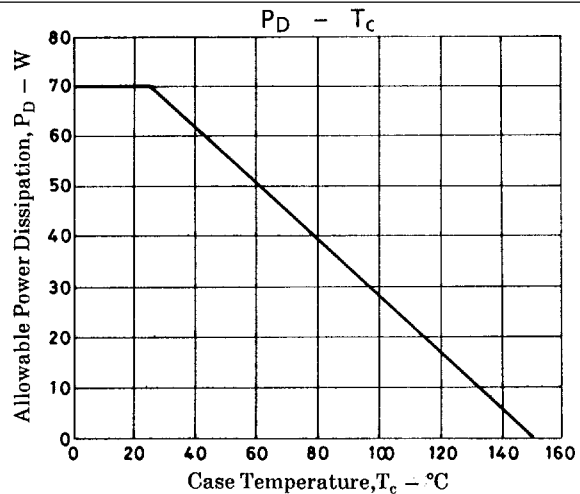
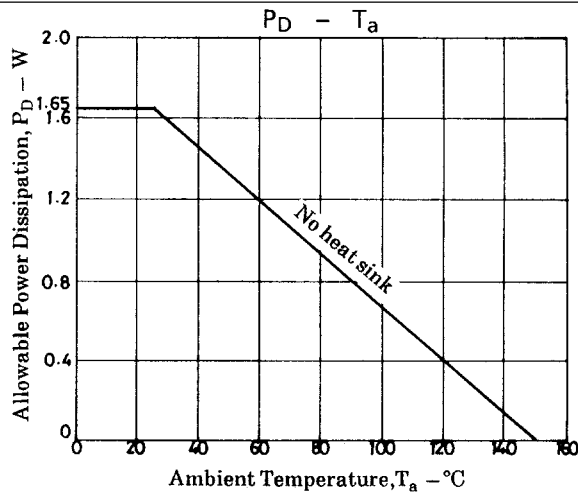
Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = -1\text{mA}$, $V_{GS} = 0$	-100			V
Gate-to-Source 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	$\text{m}\Omega$
Input Capacitance	C_{iss}	$V_{DS} = -20\text{V}$, $f = 1\text{MHz}$		1900		pF
Output Capacitance	C_{oss}	$V_{DS} = -20\text{V}$, $f = 1\text{MHz}$		400		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = -20\text{V}$, $f = 1\text{MHz}$		80		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		18		ns
Rise Time	t_r	See specified Test Circuit		25		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		300		ns
Fall Time	t_f	See specified Test Circuit		120		ns
Diode Forward Voltage	V_{SD}	$I_S = -15\text{A}$, $V_{GS} = 0$		-1.0	-1.5	V

Switching Time Test Circuit







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