



**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 2SJ259-applied equipment.
  - High density surface mount applications.
  - Small size of 2SJ259-applied equipment.

**Absolute Maximum Ratings at Ta = 25°C**

			unit
Drain to Source Voltage	V <sub>DSS</sub>	-30	V
Gate to Source Voltage	V <sub>GSS</sub>	±15	V
Drain Current(DC)	I <sub>D</sub>	-20	A
Drain Current(Pulse)	I <sub>DP</sub>	PW ≤ 10μs, duty cycle ≤ 1%	-80 A
Allowable Power Dissipation	P <sub>D</sub>	1.65	W
		T <sub>c</sub> = 25°C	70 W
Channel Temperature	T <sub>ch</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

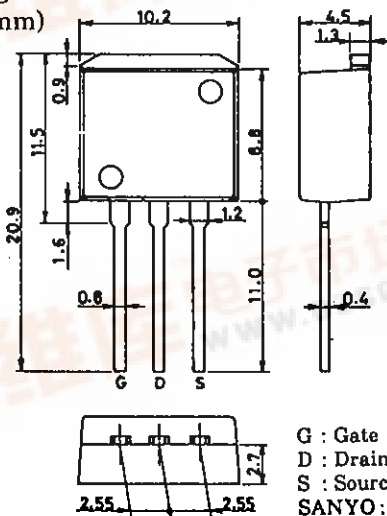
**Electrical Characteristics at Ta = 25°C**

			min	typ	max	unit
D-S Breakdown Voltage	V <sub>(BR)DSS</sub>	I <sub>D</sub> = -1mA, V <sub>GS</sub> = 0	-30			V
G-S Breakdown Voltage	V <sub>(BR)GSS</sub>	I <sub>G</sub> = ±100μA, V <sub>DS</sub> = 0	±15			V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> = -30V, V <sub>GS</sub> = 0			-100	μA
Gate to Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> = ±12V, V <sub>DS</sub> = 0			±10	μA
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> = -10V, I <sub>D</sub> = -1mA	-1.0		-2.0	V
Forward Transfer Admittance	Y <sub>fs</sub>	V <sub>DS</sub> = -10V, I <sub>D</sub> = -10A	8.5	14		S
Static Drain to Source on State Resistance	R <sub>DSS(on)</sub>	I <sub>D</sub> = -10A, V <sub>GS</sub> = -10V		40	55	mΩ
	R <sub>DSS(on)</sub>	I <sub>D</sub> = -10A, V <sub>GS</sub> = -4V		55	75	mΩ

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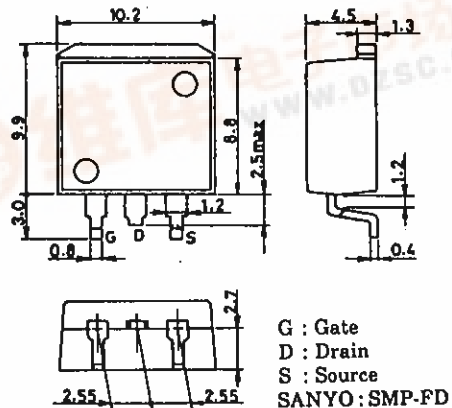
**Package Dimensions 2093**

(unit: mm)



**Package Dimensions 2090**

(unit: mm)

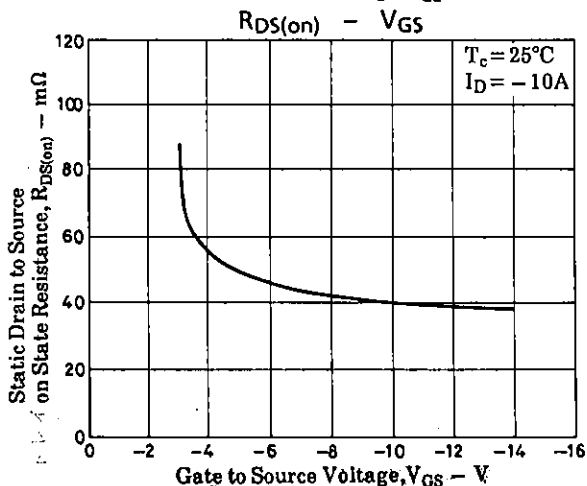
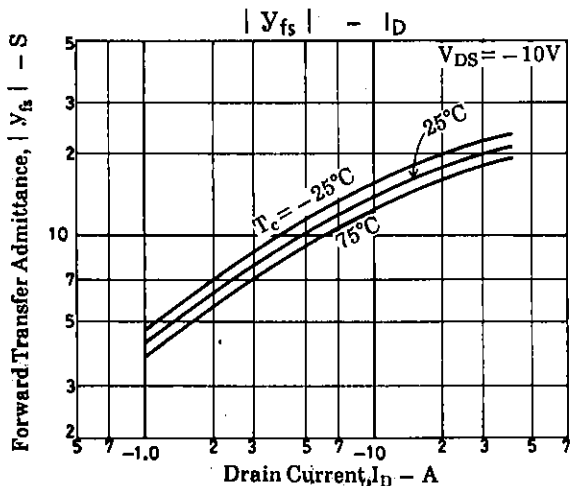
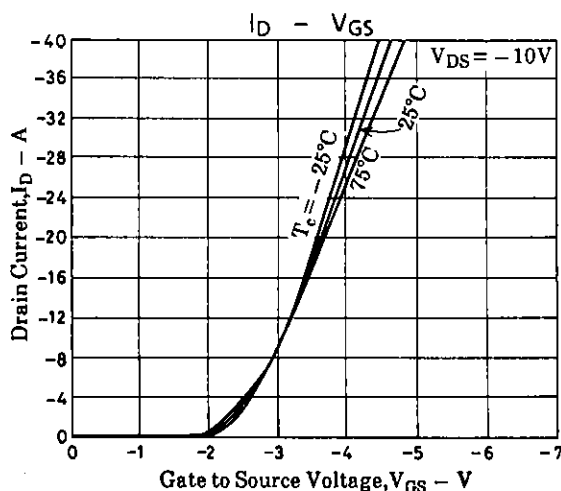
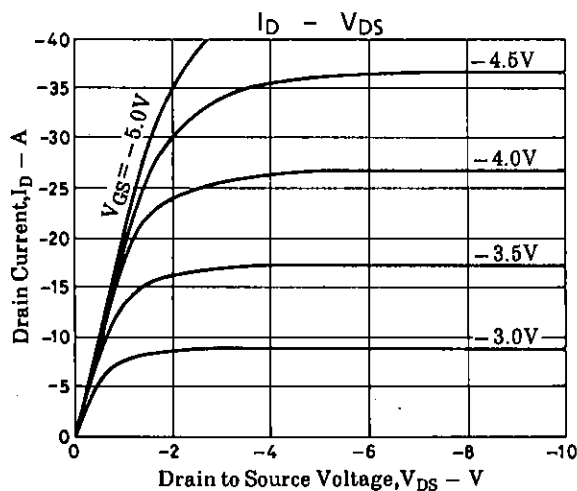
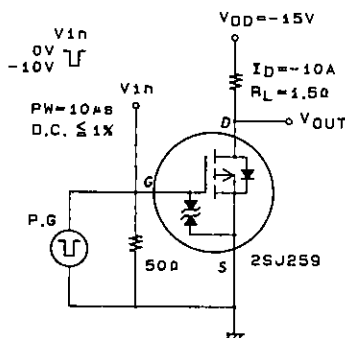


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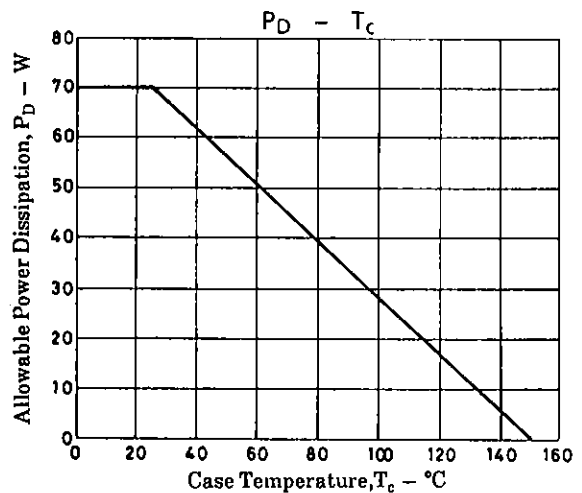
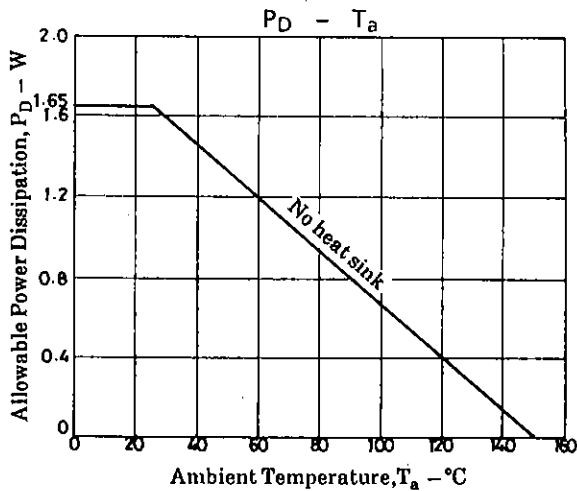
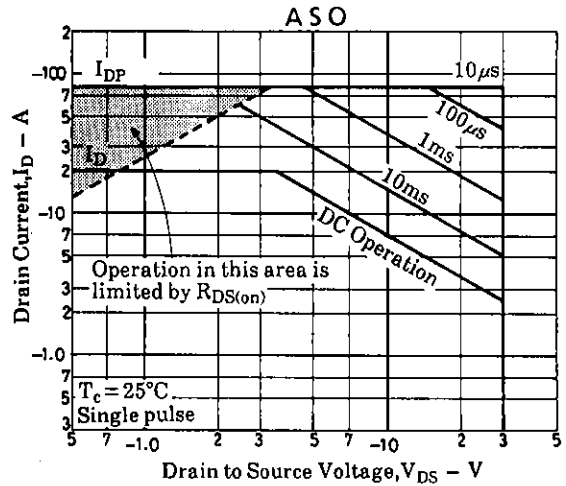
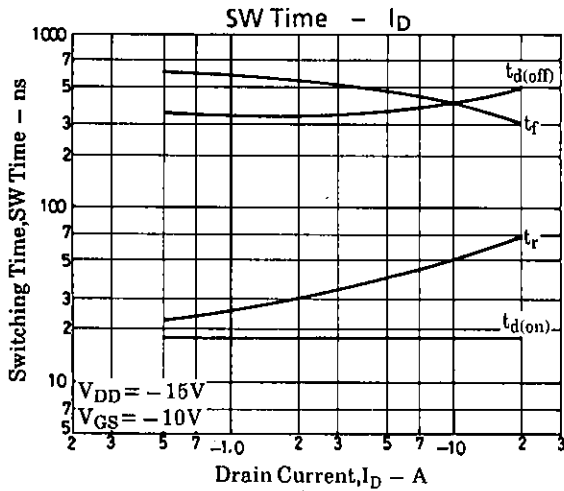
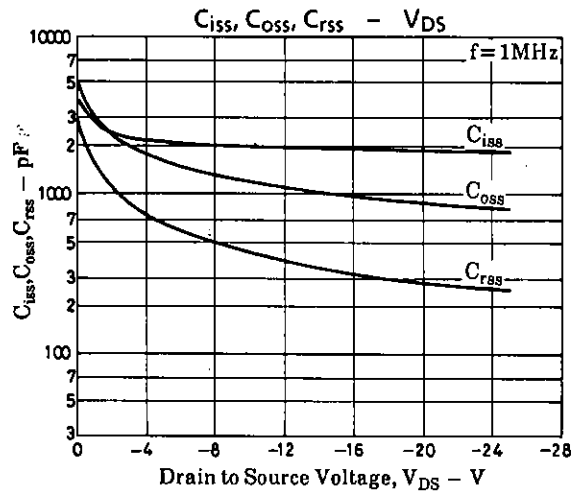
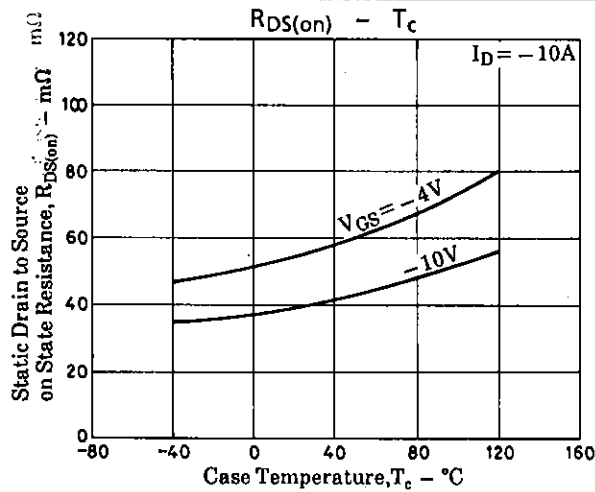
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			min	typ	max	unit
Input Capacitance	$C_{iss}$	$V_{DS} = -10V, f = 1MHz$		2000		pF
Output Capacitance	$C_{oss}$	$V_{DS} = -10V, f = 1MHz$		1200		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = -10V, f = 1MHz$		440		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		18		ns
Rise Time	$t_r$	∥		50		ns
Turn-OFF Delay Time	$t_{d(off)}$	∥		400		ns
Fall Time	$t_f$	∥		400		ns
Diode Forward Voltage	$V_{SD}$	$I_S = -20A, V_{GS} = 0$	-1.0	-1.5		V

## Switching Time Test Circuit



# 2SJ259



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