

SANYO

No.4242

2SJ257

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 2SJ257-applied equipment.
 - High density surface mount applications.
 - Small size of 2SJ257-applied equipment.

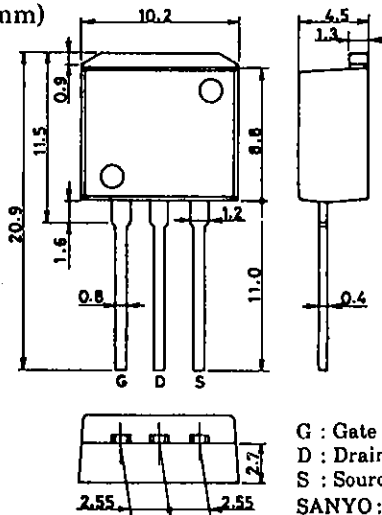
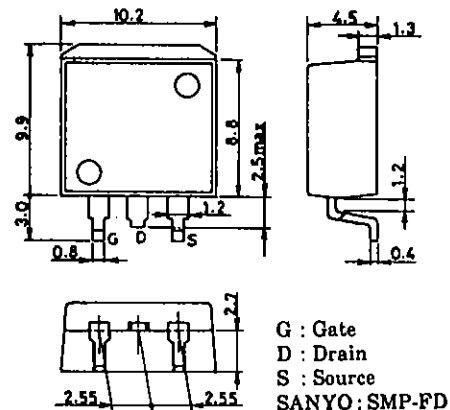
Absolute Maximum Ratings at Ta = 25°C

			unit
Drain to Source Voltage	V _{DSS}	-30	V
Gate to Source Voltage	V _{GSS}	±15	V
Drain Current(DC)	I _D	-10	A
Drain Current(Pulse)	I _{DP}	PW ≤ 10 μs, duty cycle ≤ 1%	-40 A
Allowable Power Dissipation	P _D	1.65	W
		T _c = 25°C	50 W
Channel Temperature	T _{ch}	150	°C
Storage Temperature	T _{stg}	-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 = ±100 μA, V _{DS} = 0	±15			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} = ±12V, 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 = -5A	4	6.5		S
Static Drain to Source on State Resistance	R _{DS(on)}	I _D = -5A, V _{GS} = -10V		85	120	mΩ
	R _{DS(on)}	I _D = -5A, V _{GS} = -4V		120	170	mΩ

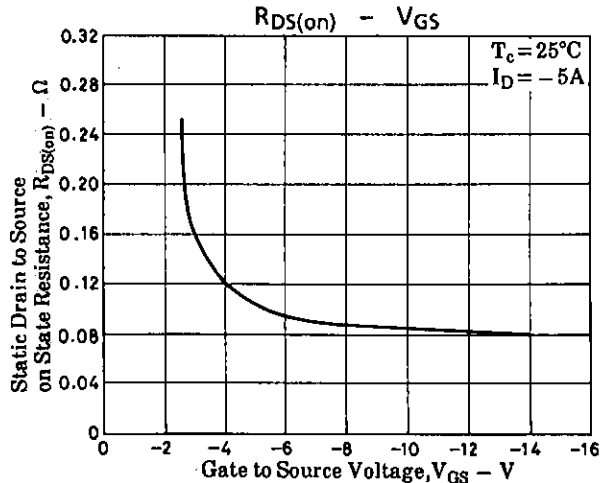
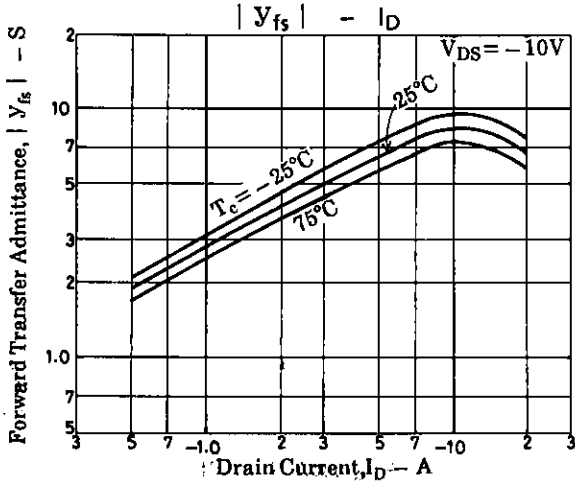
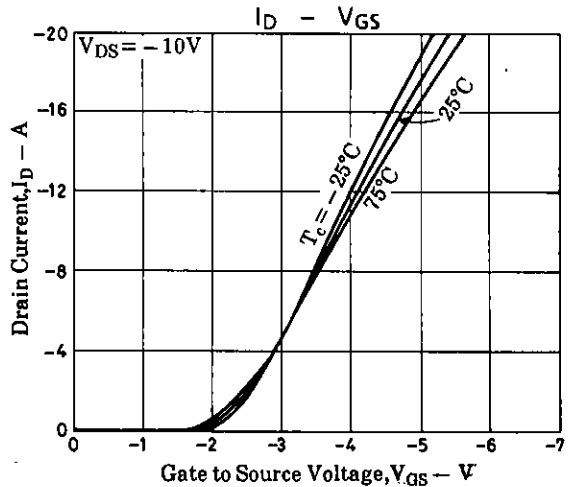
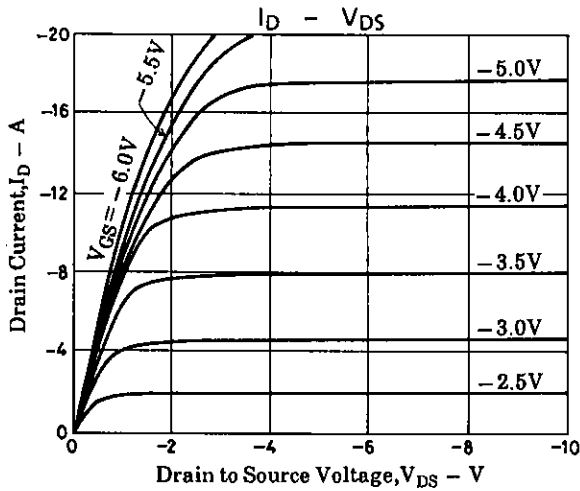
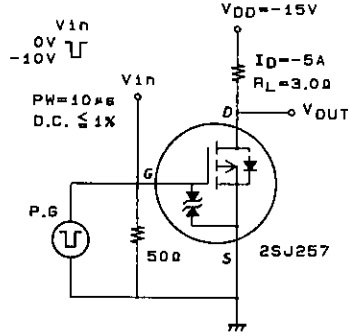
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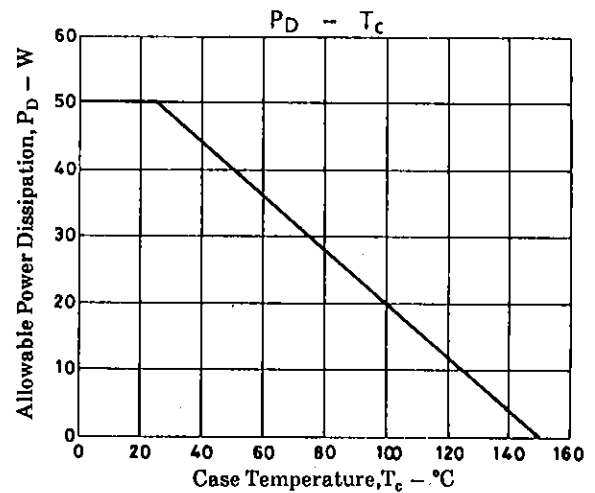
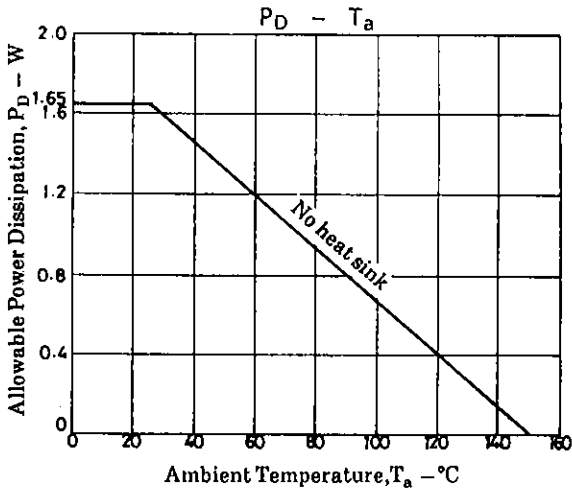
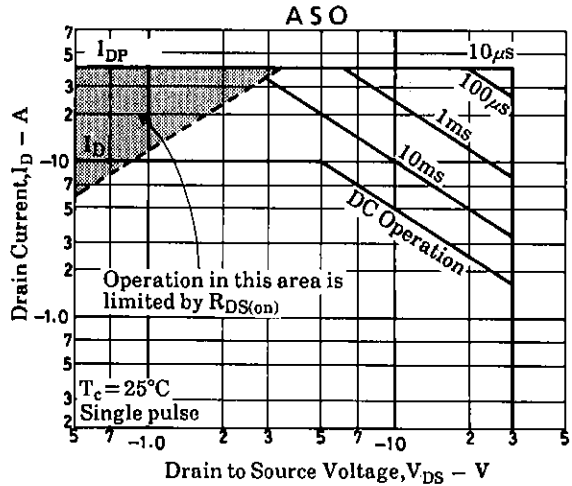
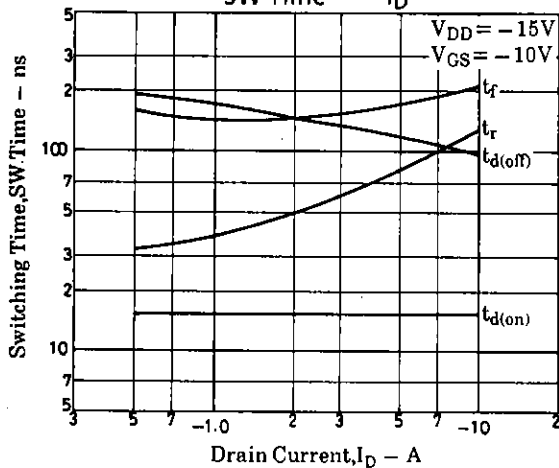
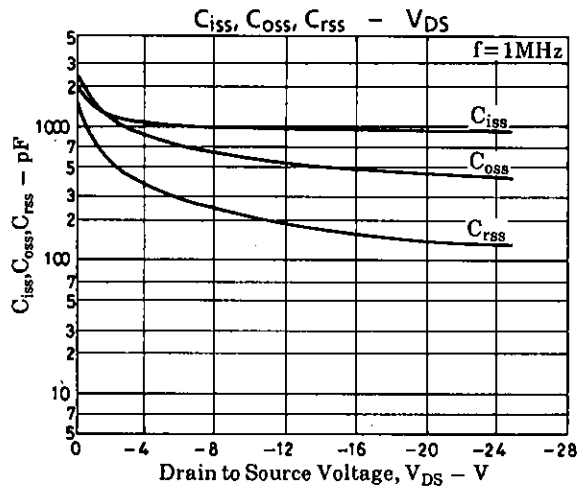
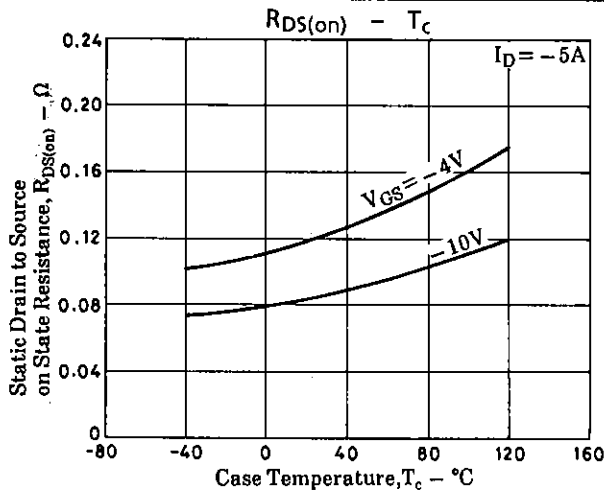
Package Dimensions 2093
(unit: mm)**Package Dimensions 2090**
(unit: mm)

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			min	typ	max	unit
Input Capacitance	C_{iss}	$V_{DS} = -10V, f = 1MHz$		1000		pF
Output Capacitance	C_{oss}	$V_{DS} = -10V, f = 1MHz$		600		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = -10V, f = 1MHz$		220		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		15		ns
Rise Time	t_r	"		80		ns
Turn-OFF Delay Time	$t_{d(off)}$	"		120		ns
Fall Time	t_f	"		170		ns
Diode Forward Voltage	V_{SD}	$I_S = -10A, V_{GS} = 0$	-1.0	-1.5		V

Switching Time Test Circuit





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