

SANYO	No.4648	2SK1899
		N-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 2SK1899-applied equipment.
 - High-density surface mount applications.
 - Small size of 2SK1899-applied equipment.

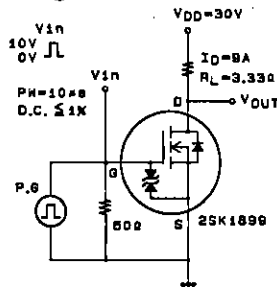
Absolute Maximum Ratings at Ta = 25°C

			unit
Drain-to-Source Voltage	V _{DSS}	60	V
Gate-to-Source Voltage	V _{GSS}	± 20	V
Drain Current(DC)	I _D	18	A
Drain Current(Pulse)	I _{DP}	PW ≤ 10μs, duty cycle ≤ 1%	72 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
Avalanche Current	I _{AV}	V _{DS} = 30V, V _{GS} = 10V, L = 0.1mH, Tc = 25°C, Single pulse	18 A

Electrical Characteristics at Ta = 25°C

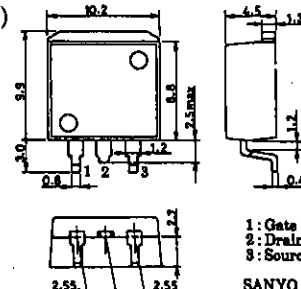
			min	typ	max	unit
D-S Breakdown Voltage	V _{(BR)DSS}	I _D = 1mA, V _{GS} = 0	60			V
G-S Breakdown Voltage	V _{(BR)GSS}	I _G = ± 100μA, V _{DS} = 0	± 20			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} = 60V, V _{GS} = 0			100	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} = ± 16V, V _{DS} = 0			± 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 = 9A	8	13		S
Static Drain-to-Source ON-State Resistance	R _{DS(on)}	I _D = 9A, V _{GS} = 10V		0.05	0.07	Ω
	R _{DS(on)}	I _D = 9A, V _{GS} = 4V		0.07	0.095	Ω
Input Capacitance	C _{iss}	V _{DS} = 20V, f = 1MHz		1230		pF
Output Capacitance	C _{oss}	V _{DS} = 20V, f = 1MHz		330		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} = 20V, f = 1MHz		65		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit.		14		ns
Rise Time	t _r	∕		35		ns
Turn-OFF Delay Time	t _{d(off)}	∕		250		ns
Fall Time	t _f	∕		120		ns
Diode Forward Voltage	V _{SD}	I _S = 18A, V _{GS} = 0	1.0	1.5		V

Switching Time Test Circuit

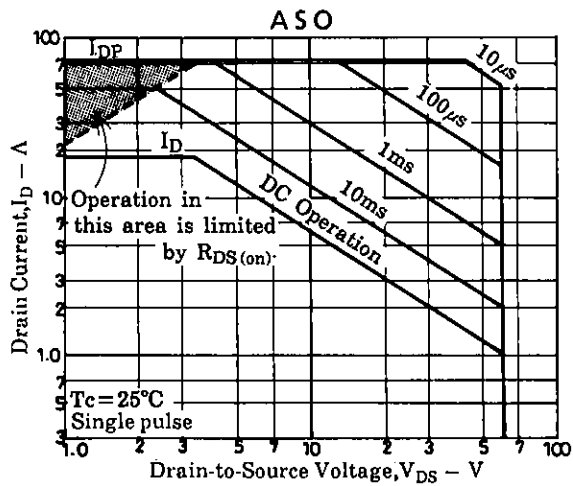
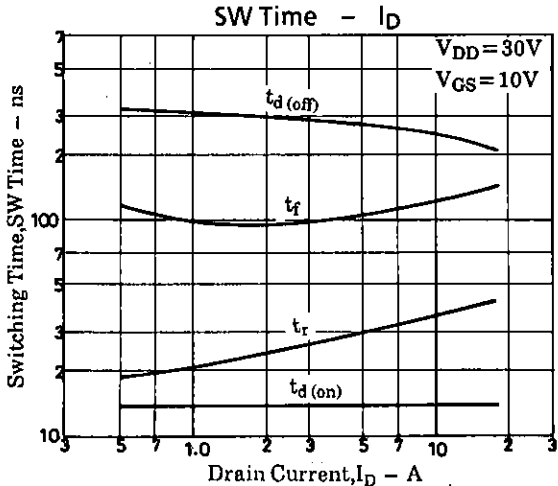
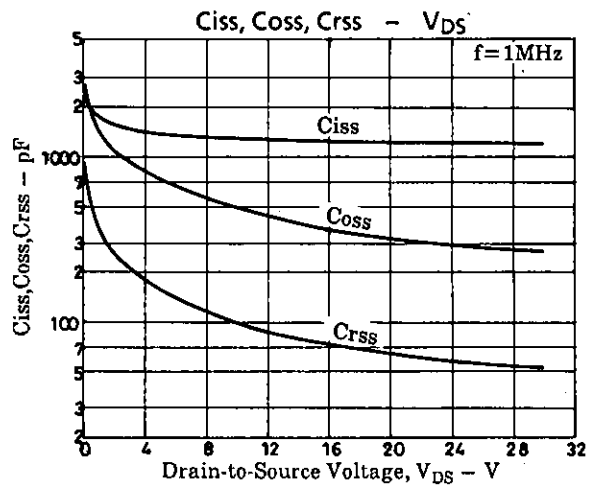
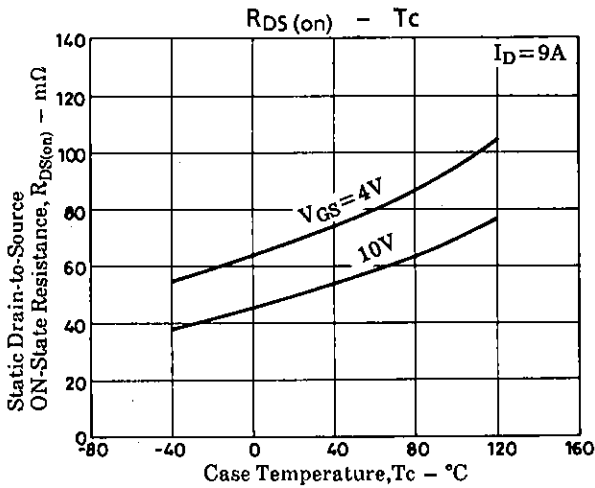
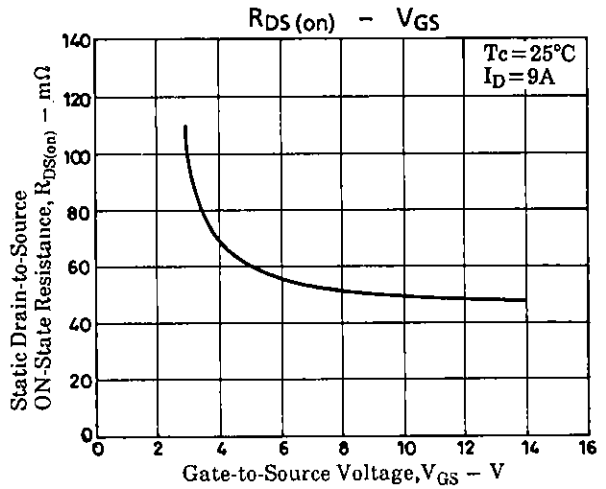
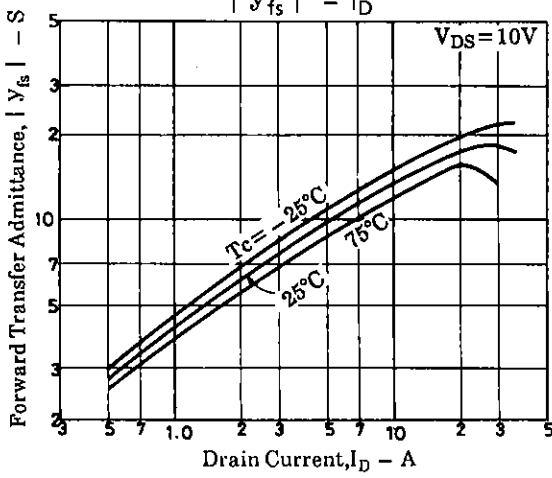
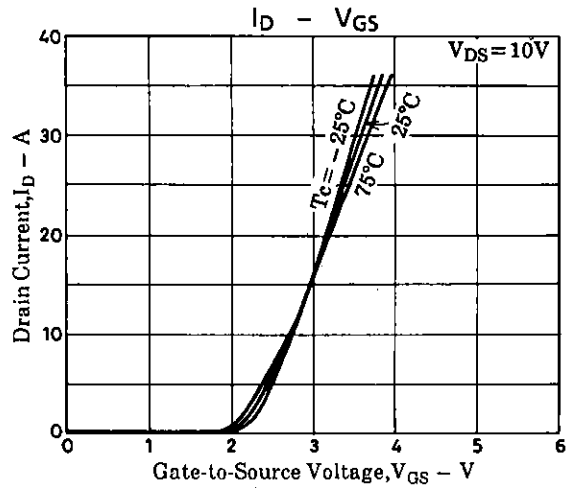
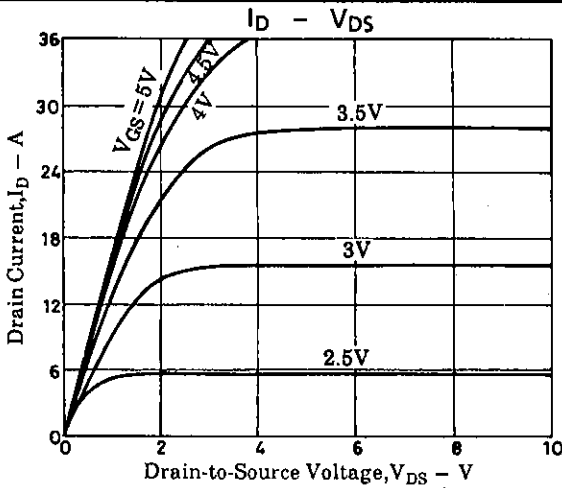


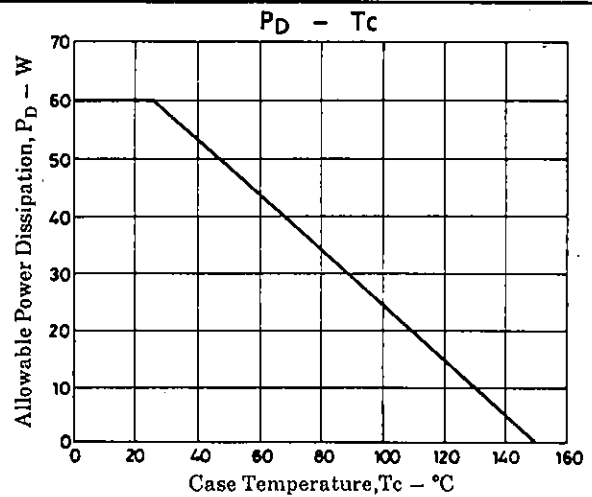
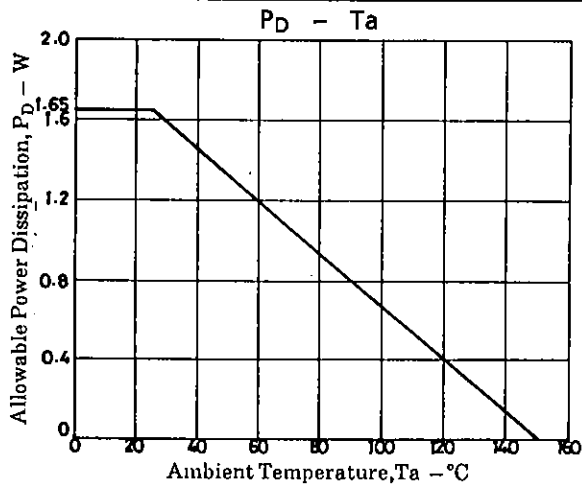
Package Dimensions 2090A

(unit : mm)



1: Gate
2: Drain
3: Source
SANYO : SMP - FD





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