

SANYO	No.4313	2SK1924
		N-Channel MOS Silicon FET Very High-Speed Switching Applications

Features

- Low ON resistance.
- Very high-speed switching.
- High-speed diode (trr = 140ns).

Absolute Maximum Ratings at Ta = 25°C

			unit
Drain-to-Source Voltage	V _{DSS}	600	V
Gate-to-Source Voltage	V _{GSS}	± 30	V
Drain Current(DC)	I _D	6	A
Drain Current(Pulse)	I _{DP}	24	A
Allowable Power Dissipation	P _D	1.75	W
		70	W
Channel Temperature	T _{ch}	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

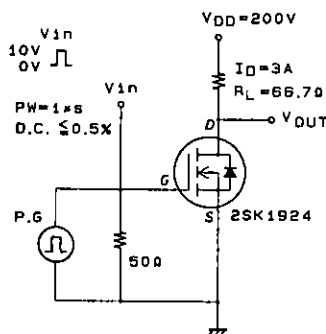
T_c = 25°C

Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
D-S Breakdown Voltage	V _{(BR)DSS}	I _D = 10mA, V _{GS} = 0	600			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 480V, V _{GS} = 0			1.0	mA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} = ± 30V, V _{DS} = 0			± 100	nA
Cutoff Voltage	V _{GS(off)}	V _{DS} = 10V, I _D = 1mA	2.0		3.0	V
Forward Transfer Admittance	Y _{fs}	V _{DS} = 10V, I _D = 3A	2.3	4.5		S
Static Drain-to-Source on State Resistance	R _{DS(on)}	I _D = 3A, V _{GS} = 10V		1.1	1.5	Ω
Input Capacitance	C _{iss}	V _{DS} = 20V, f = 1MHz		1100		pF
Output Capacitance	C _{oss}	V _{DS} = 20V, f = 1MHz		150		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} = 20V, f = 1MHz		45		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)}	“		240		ns
Fall Time	t _f	“		60		ns
Diode Forward Voltage	V _{SD}	I _S = 6A, V _{GS} = 0			1.5	V
Diode Reverse Recovery Time	trr	I _S = 6A, di/dt = 100A/μs		140		ns

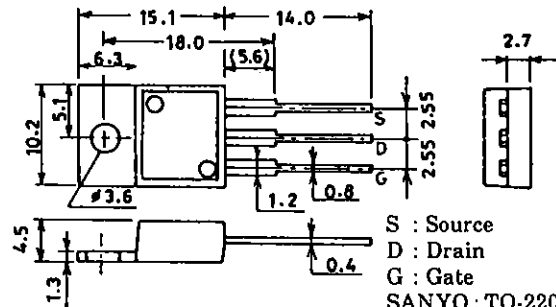
(Note) Be careful in handling the 2SK1924 because it has no protection diode between gate and source.

Switching Time Test Circuit

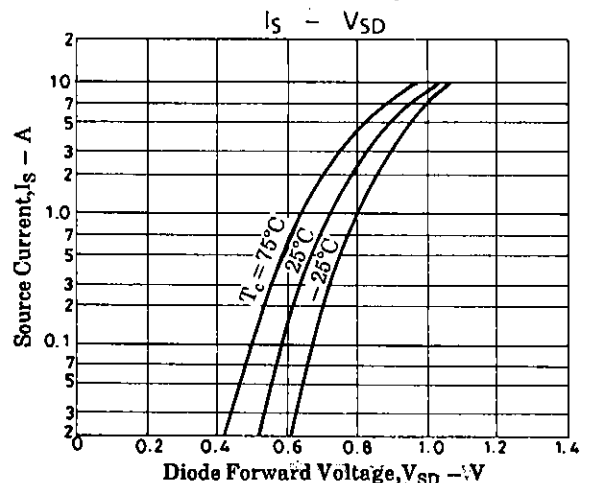
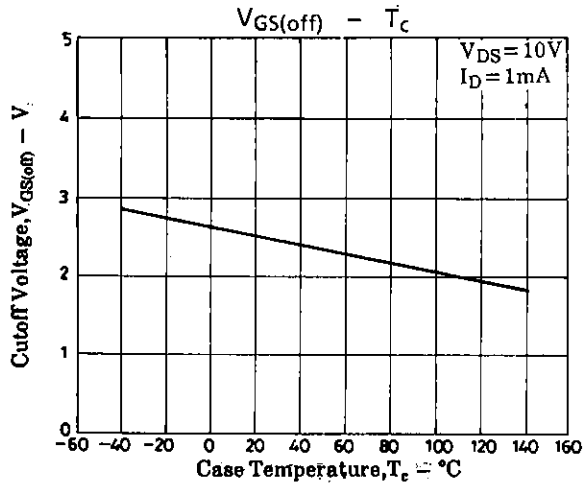
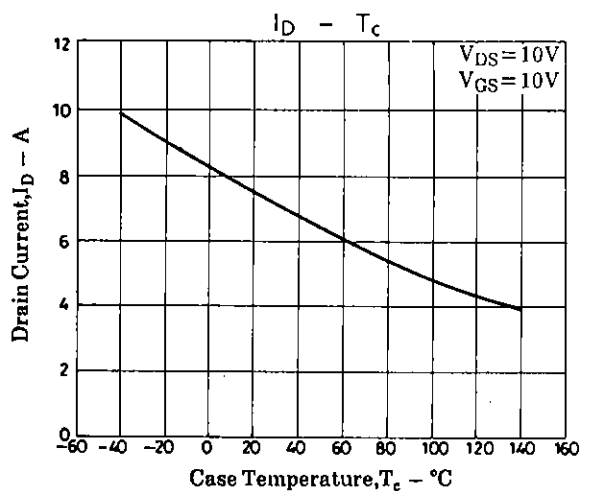
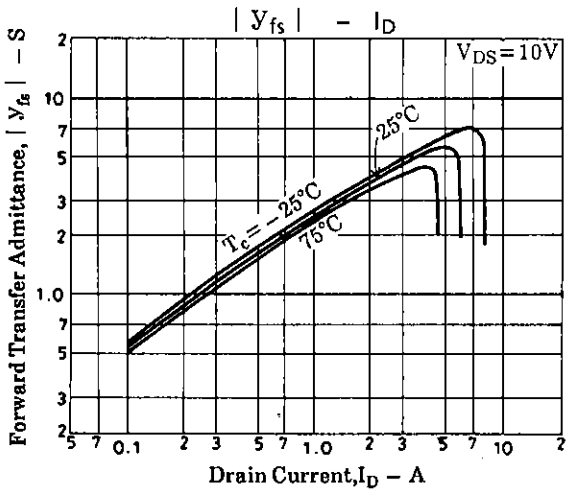
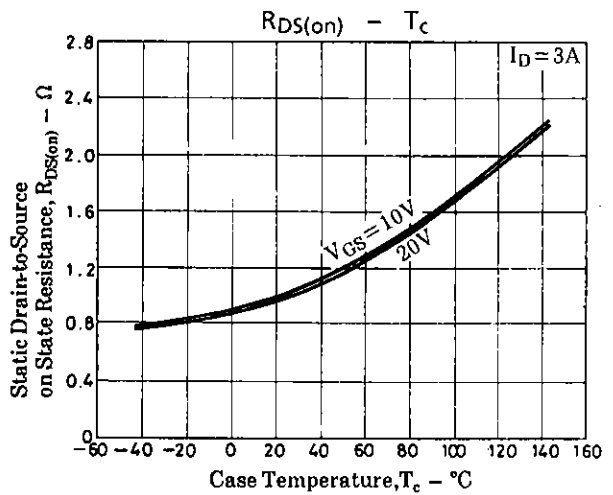
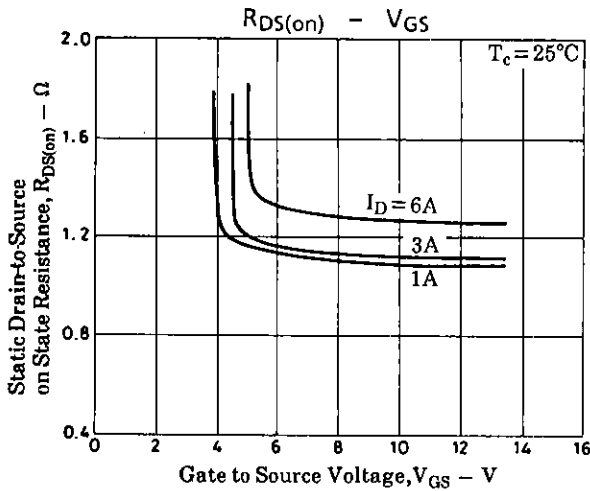
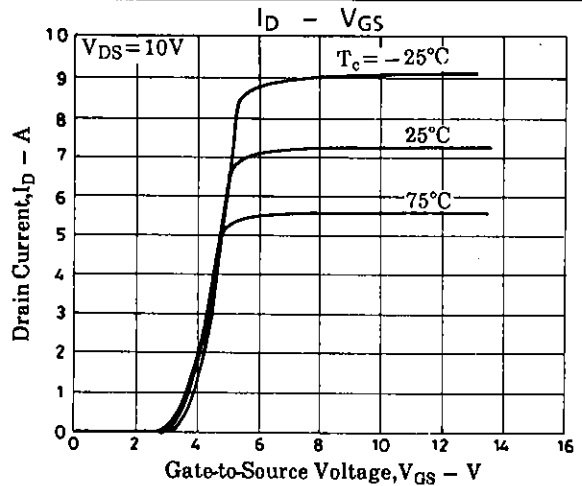
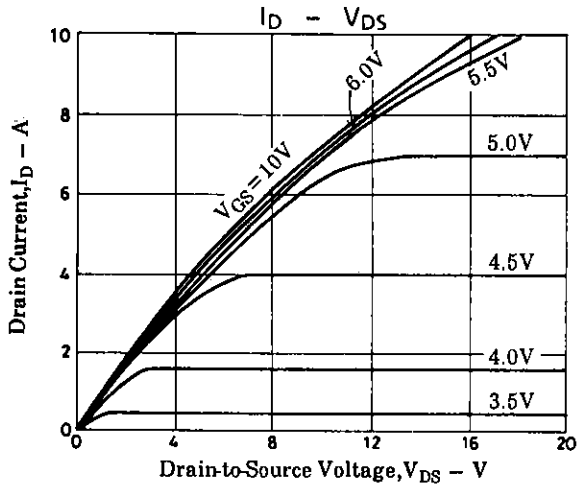


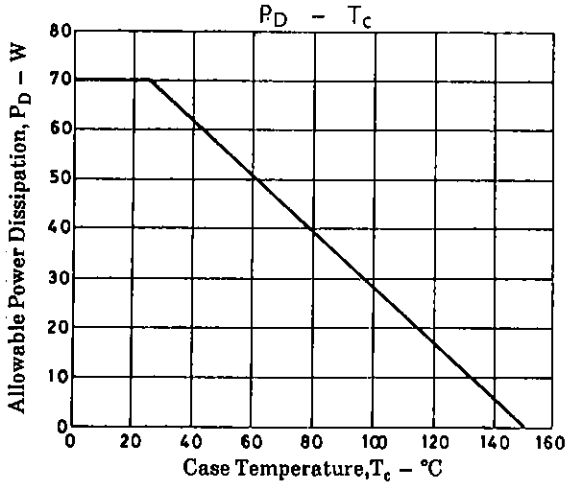
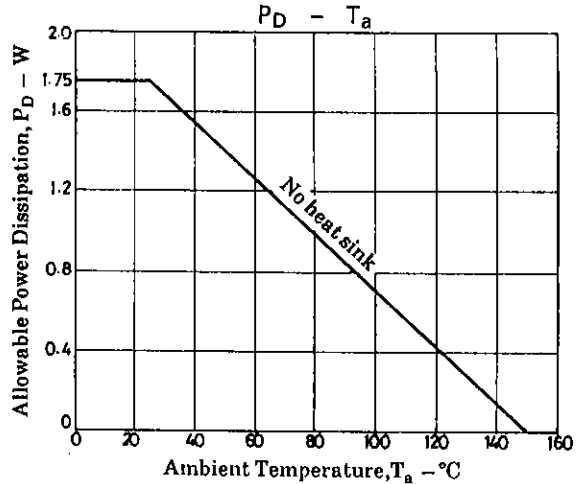
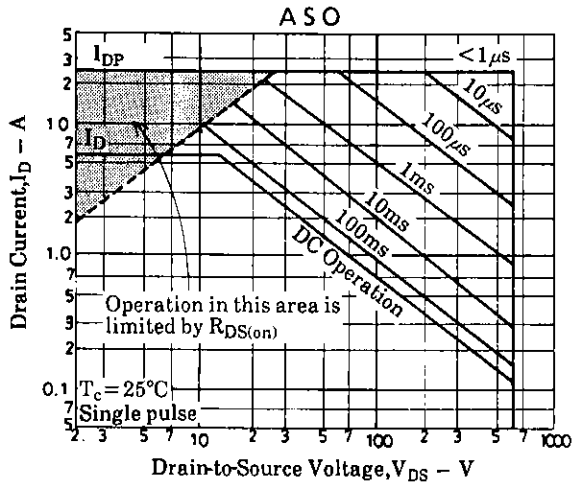
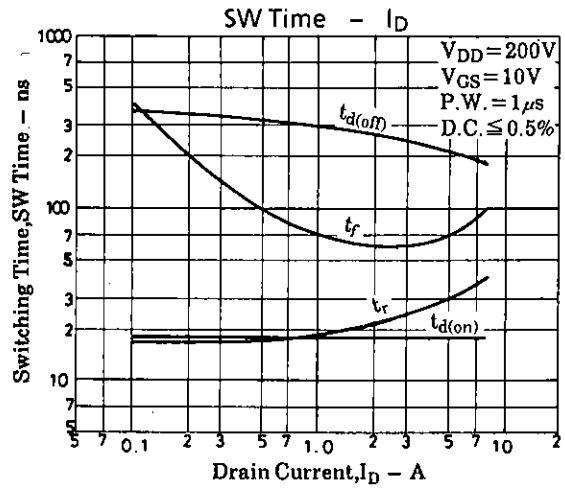
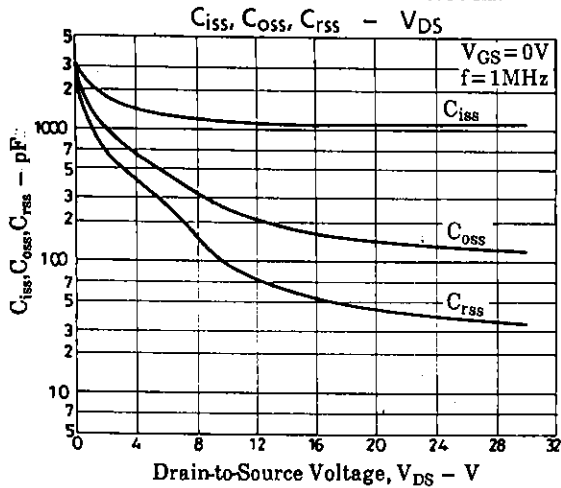
Package Dimensions 2052B

(unit : mm)



S : Source
D : Drain
G : Gate
SANYO : TO-220AB





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