

SANYO

No.3823

2SK1728

N-Channel MOS Silicon FET

Very High-Speed
Switching Applications**Features**

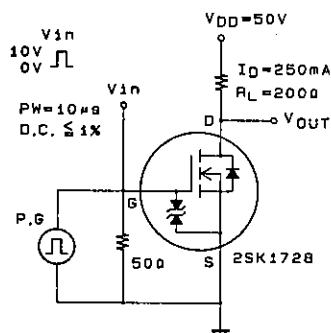
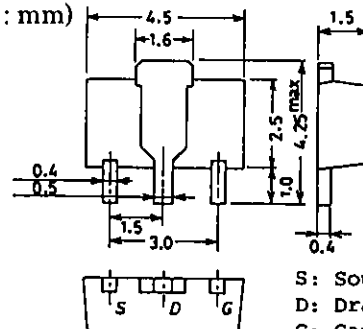
- Low ON resistance.
- Very high-speed switching.
- Low-voltage drive.

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

			unit
Drain to Source Voltage	V_{DS}	100	V
Gate to Source Voltage	V_{GS}	± 15	V
Drain Current(DC)	I_D	1	A
Drain Current(Pulse)	I_{DP}	4	A
Allowable Power Dissipation	P_D	$PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$ $T_c = 25^\circ\text{C}$ Mounted on ceramic board ($250\text{mm}^2 \times 0.8\text{mm}$)	3.5 1.3 W W
Channel Temperature	T_{ch}	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1\text{mA}, V_{GS} = 0$	100			V
Zero Gate Voltage	I_{DSS}	$V_{DS} = 100\text{V}, V_{GS} = 0$			100	μA
Drain Current						
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} $	$V_{DS} = 10\text{V}, I_D = 500\text{mA}$	0.6	1.0		S
Static Drain to Source	$R_{DS(on)}$	$I_D = 500\text{mA}, V_{GS} = 10\text{V}$		2.7	3.5	Ω
on State Resistance	$R_{DS(on)}$	$I_D = 500\text{mA}, V_{GS} = 4\text{V}$		3.2	4.2	Ω
Input Capacitance	C_{iss}	$V_{DS} = 20\text{V}, f = 1\text{MHz}$		45		pF
Output Capacitance	C_{oss}	$V_{DS} = 20\text{V}, f = 1\text{MHz}$		15		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 20\text{V}, f = 1\text{MHz}$		3		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		5		ns
Rise Time	t_r	"		10		ns
Turn-OFF Delay Time	$t_{d(off)}$	"		30		ns
Fall Time	t_f	"		20		ns
Diode Forward Voltage	V_{SD}	$I_S = 1\text{A}, V_{GS} = 0$		1.0		V

Switching Time Test Circuit**Package Dimensions 2062**
(unit : mm)

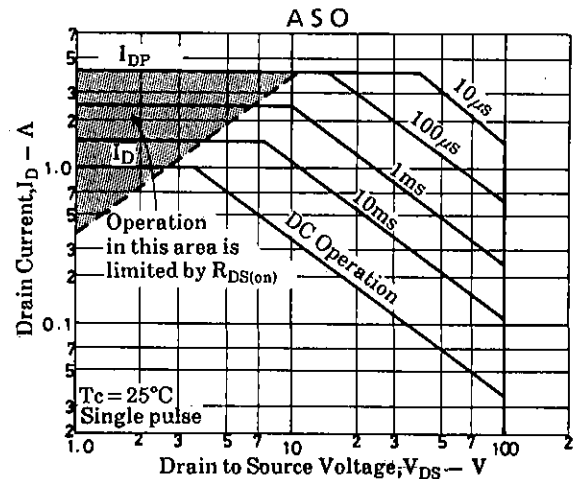
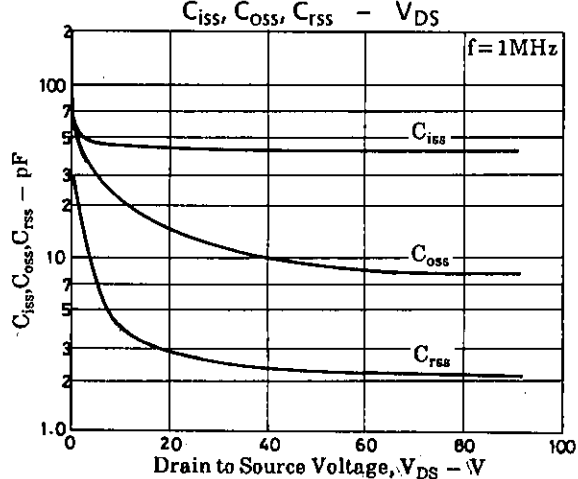
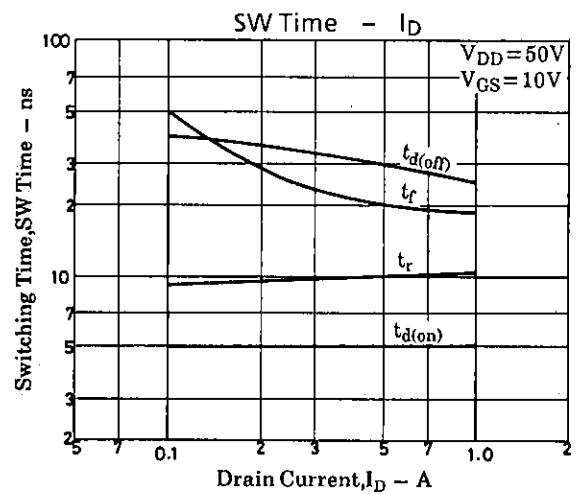
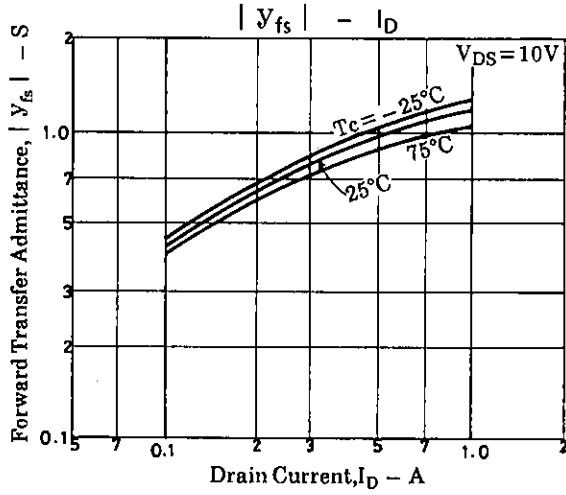
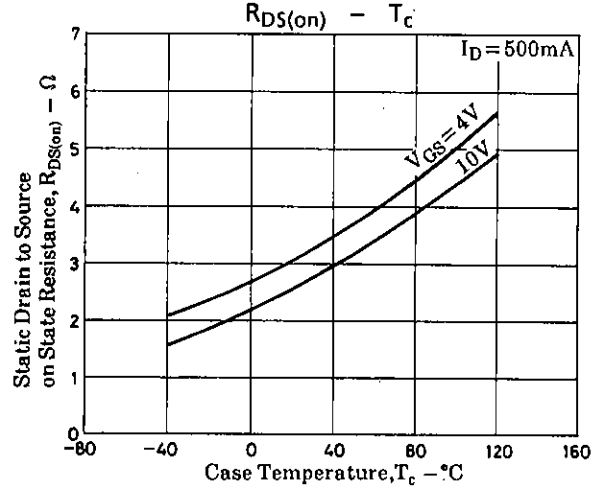
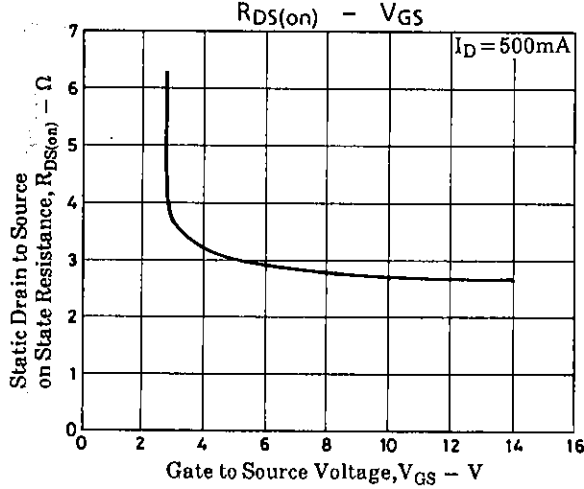
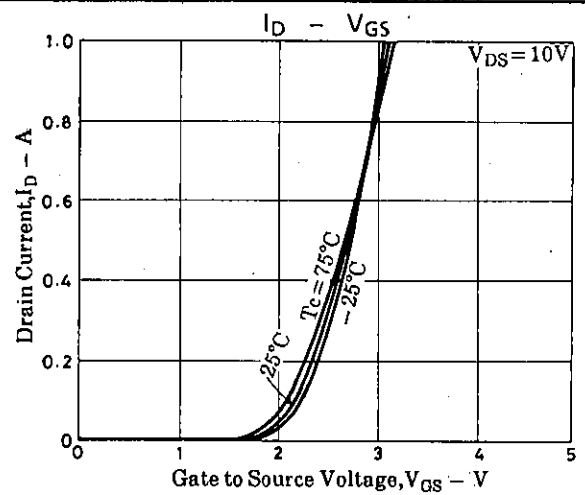
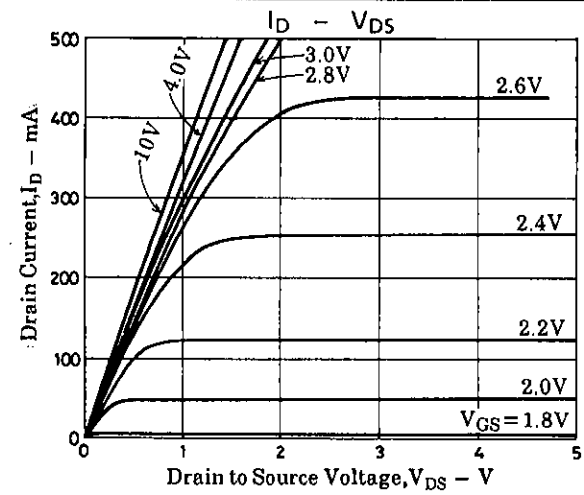
S: Source
D: Drain
G: Gate

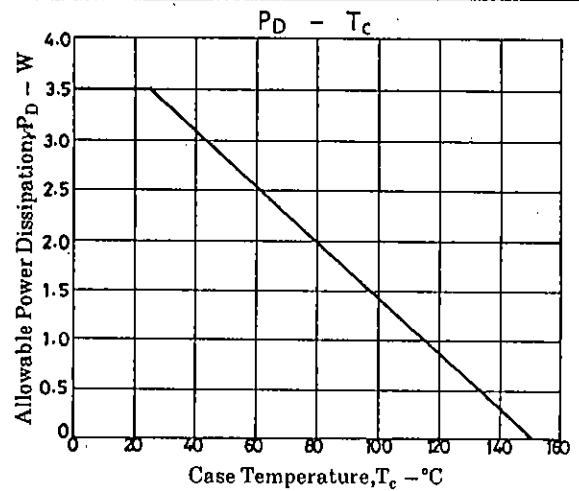
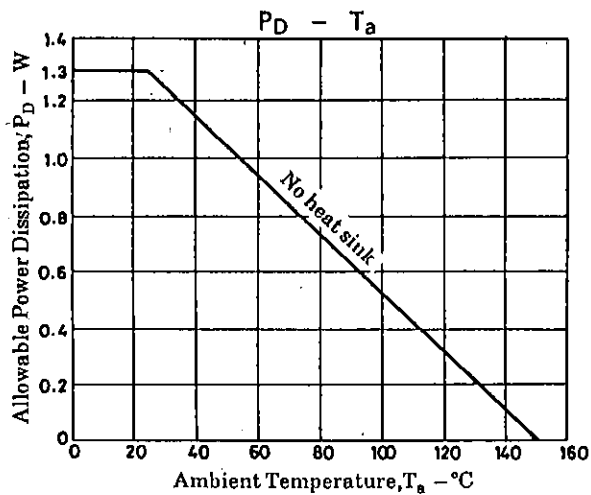
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