

SANYO	No.3442	2SK1439
		N-Channel MOS Silicon FET Very High-Speed Switching Applications

Features

- Low ON-state resistance.
- Very high-speed switching.

Absolute Maximum Ratings at Ta = 25°C

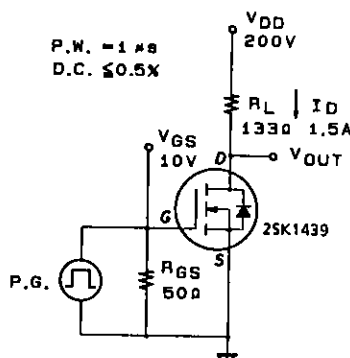
			unit
Drain to Source Voltage	V _{DS}	450	V
Gate to Source Voltage	V _{GSS}	±30	V
Drain Current(DC)	I _D	3	A
Drain Current(Pulse)	I _{DP}	PW ≤ 10μs, duty cycle ≤ 1%	12 A
Allowable Power Dissipation	P _D	Tc = 25°C	50 W
			1.75 W
Channel Temperature	T _{ch}		150 °C
Storage Temperature	T _{stg}		-55 to +150 °C

Electrical Characteristics at Ta = 25°C

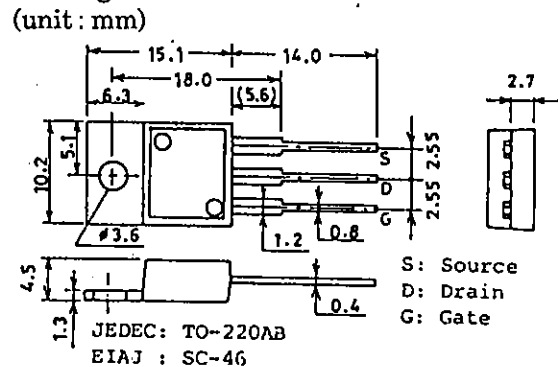
			min	typ	max	unit
D-S Breakdown Voltage	V _{(BR)DSS}	I _D = 1mA, V _{GS} = 0	450			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 450V, V _{GS} = 0			1.0	mA
Gate to Source Leakage Current	I _{GSS}	V _{GS} = ±30V, V _{DS} = 0			±100	nA
Cutoff Voltage	V _{GS(off)}	V _{DS} = 10V, I _D = 1mA	2.0		3.0	V
Forward Transfer Admittance	Y _{fs}	V _{DS} = 10V, I _D = 1.5A	1.0	2.0		S
Static Drain to Source on State Resistance	R _{DS(on)}	I _D = 1.5A, V _{GS} = 10V		2.0	2.6	Ω
Input Capacitance	C _{iss}	V _{DS} = 20V, f = 1MHz		400		pF
Output Capacitance	C _{oss}	V _{DS} = 20V, f = 1MHz		60		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} = 20V, f = 1MHz		25		pF
Turn-ON Delay Time	t _{d(on)}	I _D = 1.5A, V _{GS} = 10V V _{DD} = 200V, R _{GS} = 50Ω		12		ns
Rise Time	t _r		20		ns	
Turn-OFF Delay Time	t _{d(off)}		80		ns	
Fall Time	t _f		35		ns	
Diode Forward Voltage	V _{SD}		I _S = 3A, V _{GS} = 0			1.8

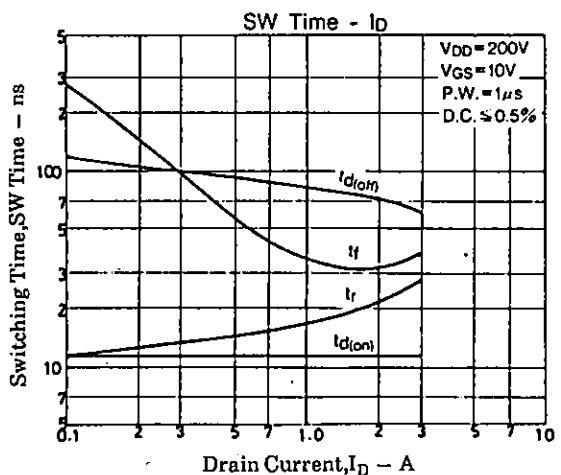
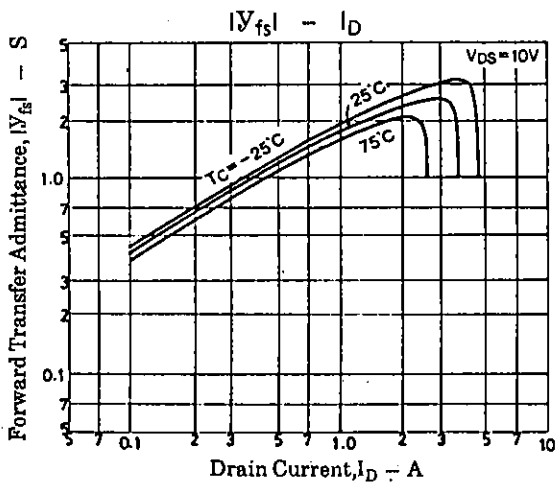
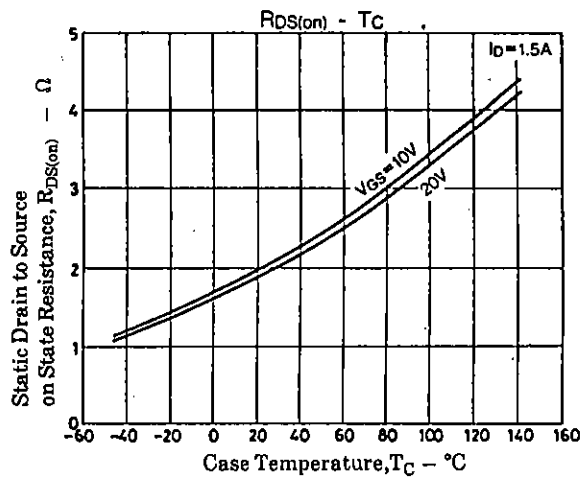
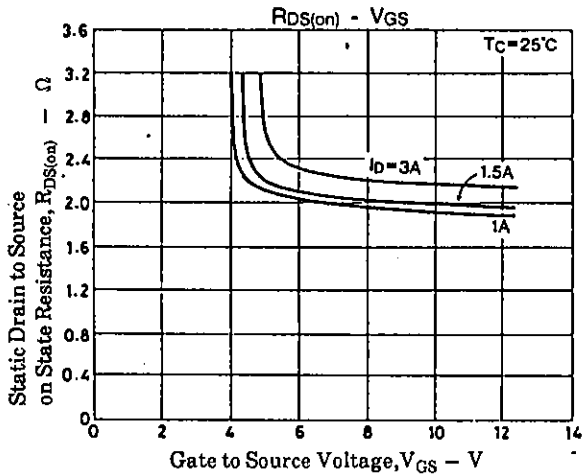
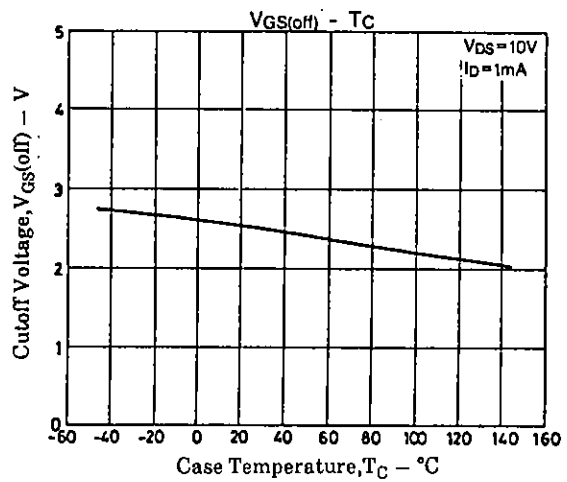
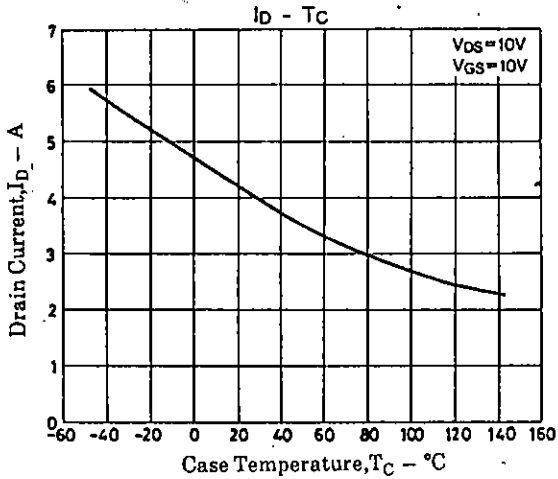
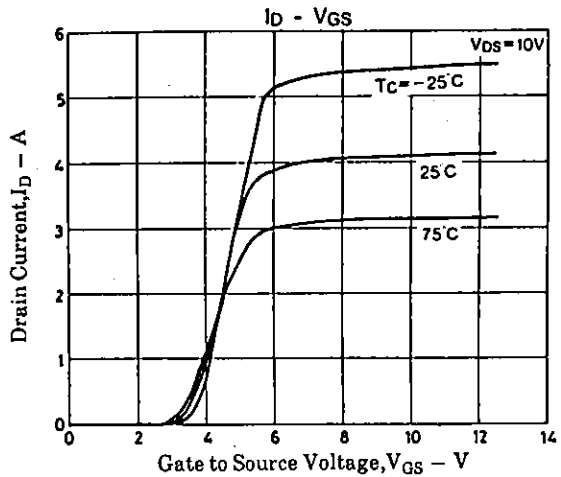
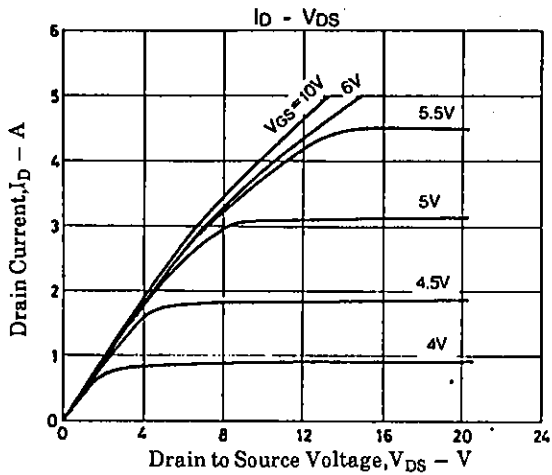
(Note) Be careful in handling the 2SK1439 because it has no protection diode between gate and source.

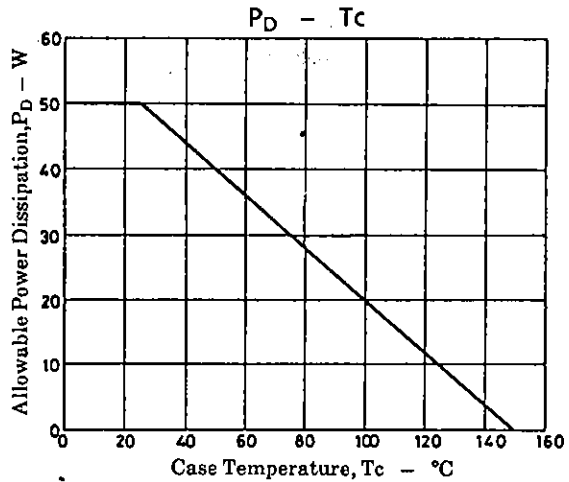
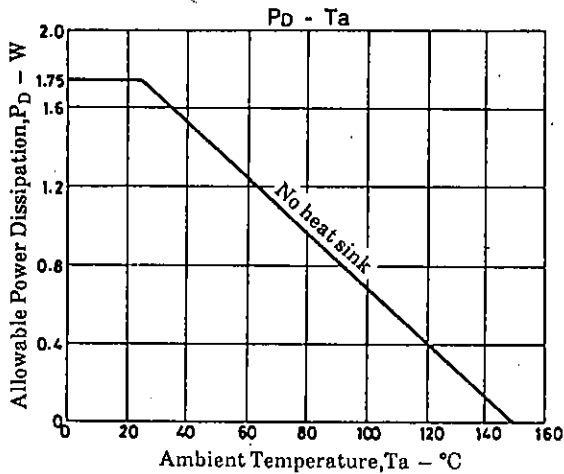
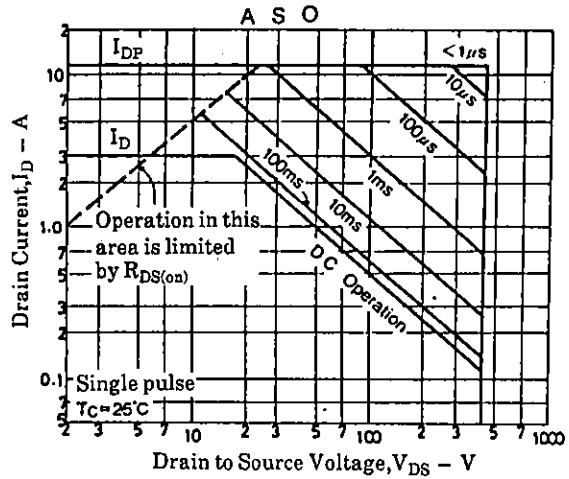
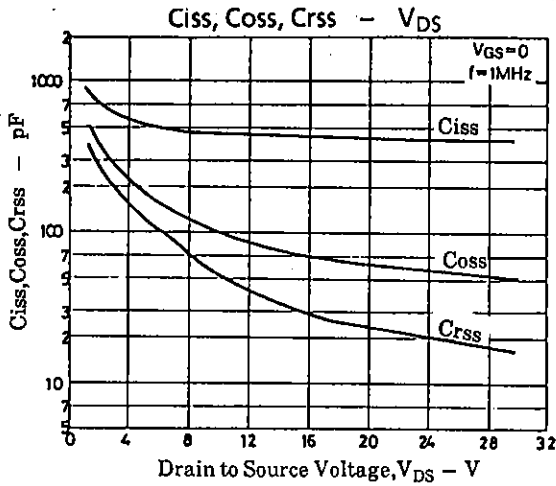
Switching Time Test Circuit



Package Dimensions 2052B







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