

SANYO

No.3460

2SK1457

N-Channel MOS Silicon FET

Very High-Speed Switching Applications

Features

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

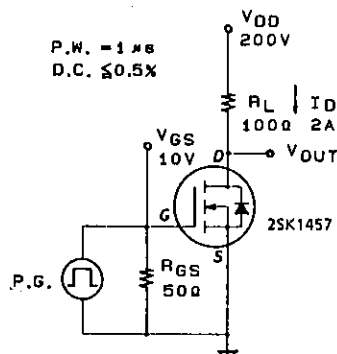
Absolute Maximum Ratings at Ta=25°C

			unit
Drain to Source Voltage	V _{DSS}	900	V
Gate to Source Voltage	V _{GS}	±30	V
Drain Current(DC)	I _D	5	A
Drain Current(Pulse)	I _{DP}	PW ≤ 10μs, duty cycle ≤ 1%	10
Allowable Power Dissipation	P _D	Tc = 25°C	70
			1.75
Channel Temperature	T _{ch}		150
Storage Temperature	T _{stg}		-55 to +150

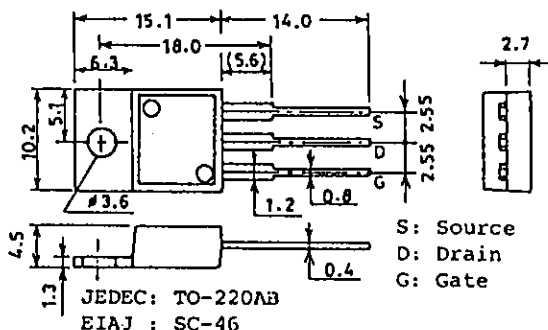
Electrical Characteristics at Ta=25°C

			min	typ	max	unit
D-S Breakdown Voltage	V _{(BR)DSS}	I _D = 1mA, V _{GS} = 0	900			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 900V, 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} = 20V, I _D = 2A	1.0	2.0		S
Static Drain to Source on State Resistance	R _{DS(on)}	I _D = 2A, V _{GS} = 10V		2.8	3.6	Ω
Input Capacitance	C _{iss}	V _{DS} = 20V, f = 1MHz		700		pF
Output Capacitance	C _{oss}	V _{DS} = 20V, f = 1MHz		300		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} = 20V, f = 1MHz		170		pF
Turn-ON Delay Time	t _{d(on)}	I _D = 2A, V _{GS} = 10V V _{DD} = 200V, R _{GS} = 50Ω		15		ns
Rise Time	t _r		35		ns	
Turn-OFF Delay Time	t _{d(off)}		200		ns	
Fall Time	t _f		65		ns	
Diode Forward Voltage	V _{SD}	I _S = 5A, V _{GS} = 0			1.8	V

(Note) Be careful in handling the 2SK1457 because it has no protection diode between gate and source.

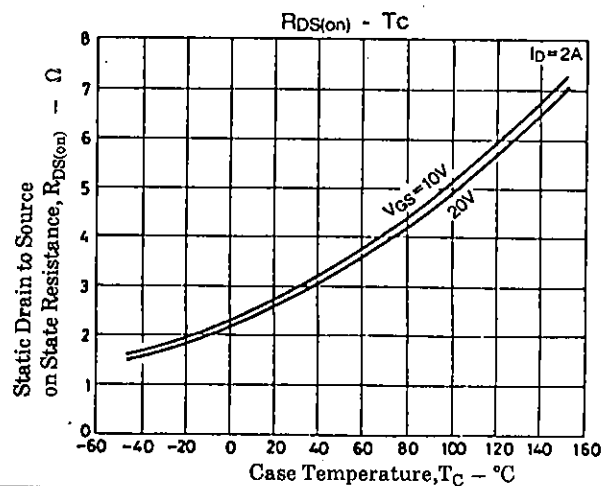
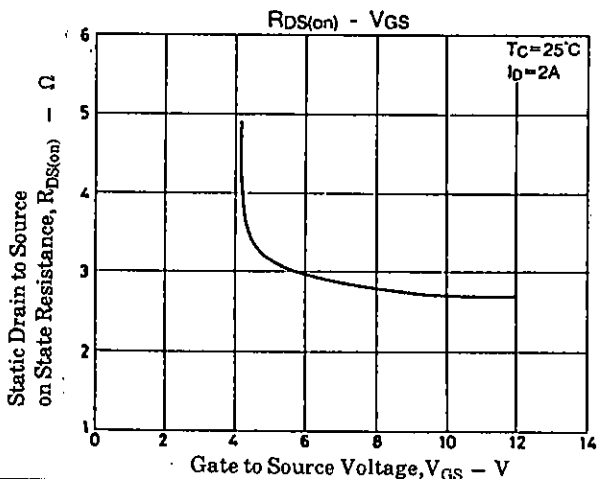
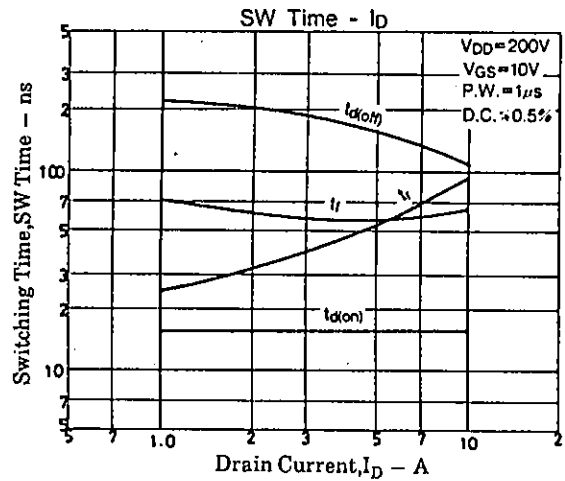
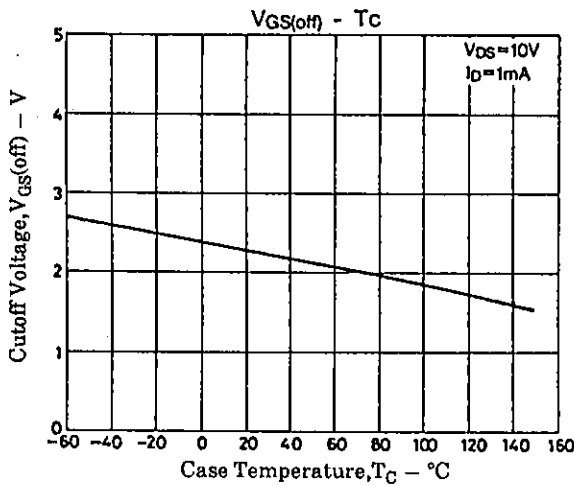
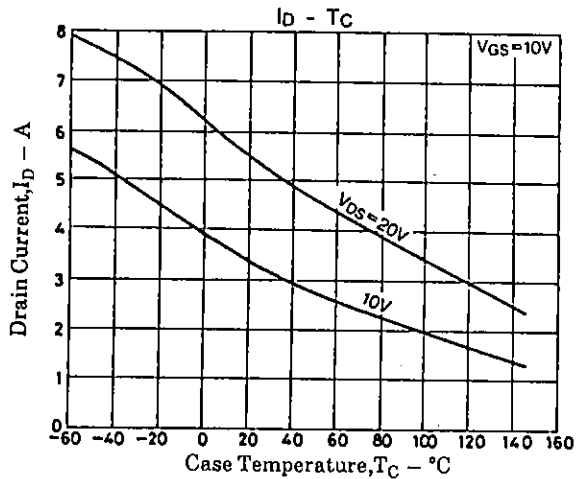
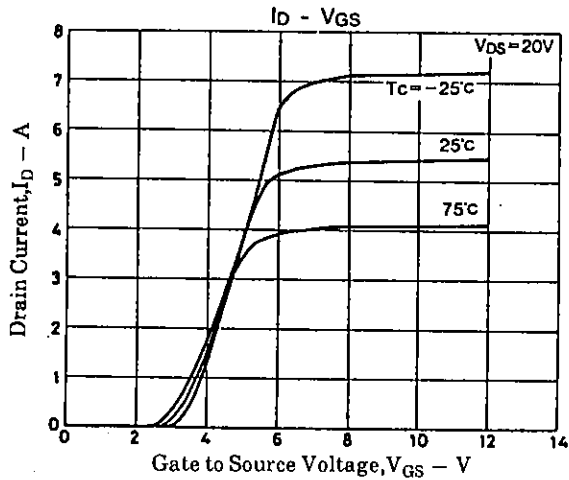
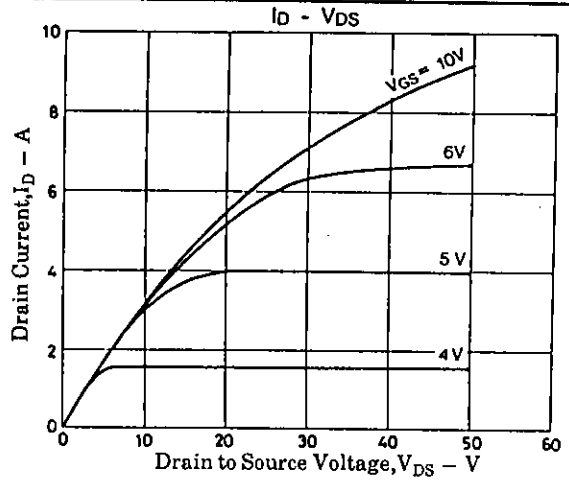
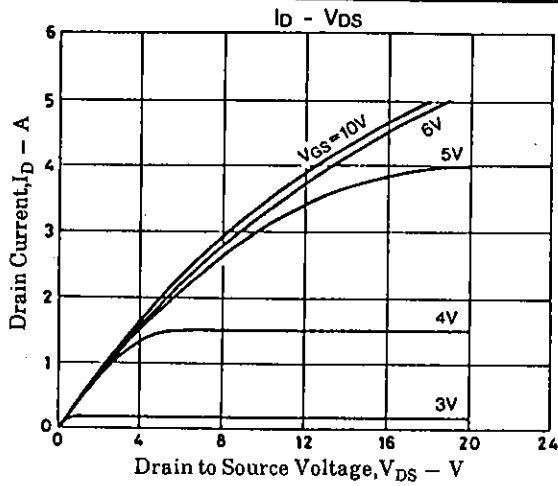
Switching Time Test Circuit**Package Dimensions 2052B**

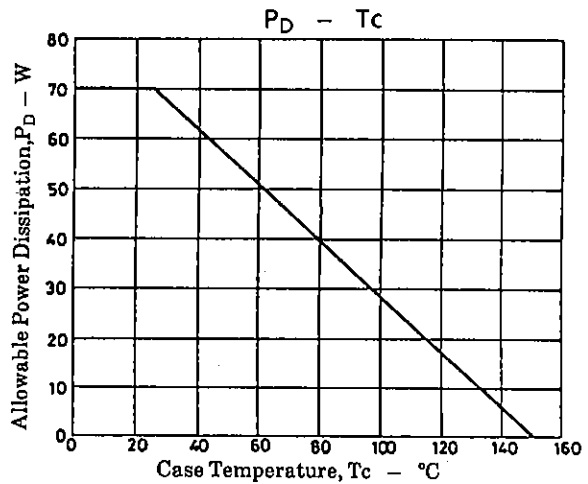
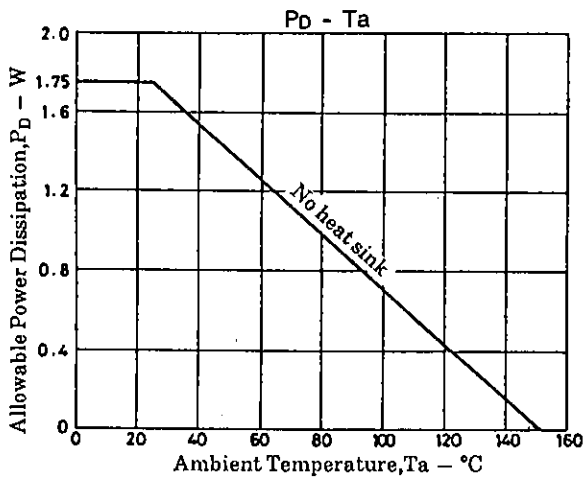
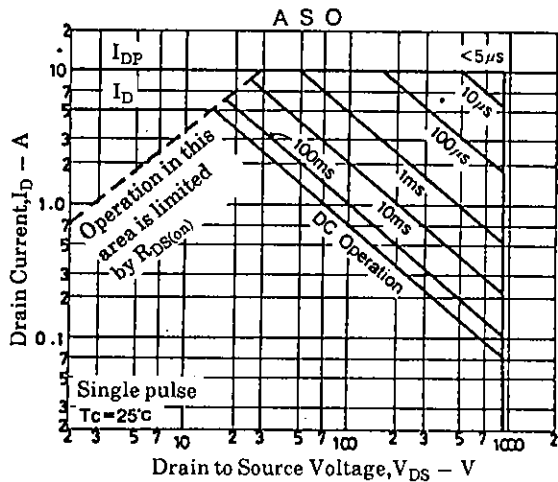
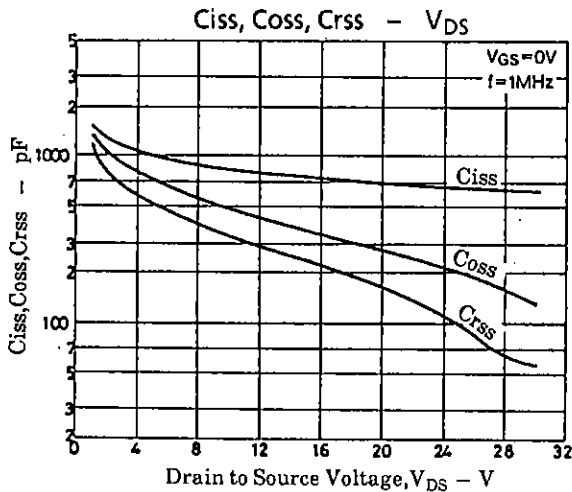
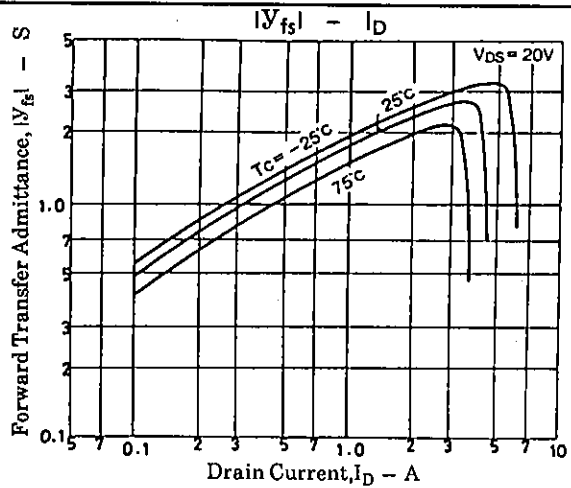
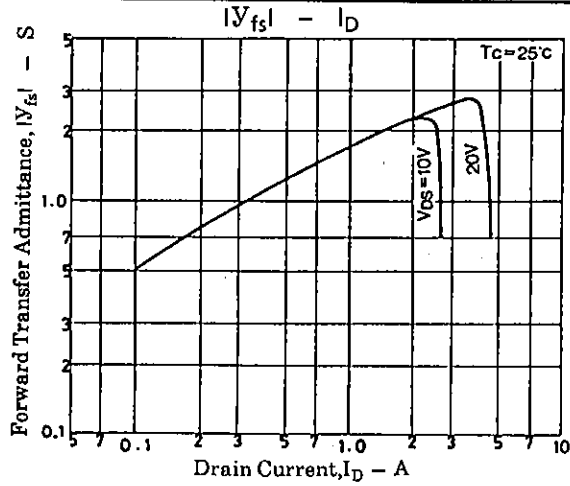
(unit: mm)



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