

SANYO	No.3453	2SK1450
		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

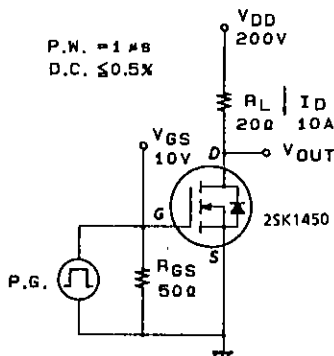
			unit
Drain to Source Voltage	V _{DSS}	450	V
Gate to Source Voltage	V _{GS}	±30	V
Drain Current(DC)	I _D	20	A
Drain Current(Pulse)	I _{DP}	PW ≤ 10μs, duty cycle ≤ 1%	A
Allowable Power Dissipation	P _D	Tc = 25°C	150
			2.5
Channel Temperature	Tch	150	°C
Storage Temperature	Tstg	-55 to +150	°C

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 = 10A	7.5	15		S
Static Drain to Source on State Resistance	R _{DS(on)}	I _D = 10A, V _{GS} = 10V		0.24	0.3	Ω
Input Capacitance	C _{iss}	V _{DS} = 20V, f = 1MHz		3200		pF
Output Capacitance	C _{oss}	V _{DS} = 20V, f = 1MHz		440		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} = 20V, f = 1MHz		160		pF
Turn-ON Delay Time	t _{d(on)}	I _D = 10A, V _{GS} = 10V V _{DD} = 200V, R _{GS} = 50Ω		40		ns
Rise Time	t _r		100		ns	
Turn-OFF Delay Time	t _{d(off)}		450		ns	
Fall Time	t _f		150		ns	
Diode Forward Voltage	V _{SD}	I _S = 20A, V _{GS} = 0			1.8	V

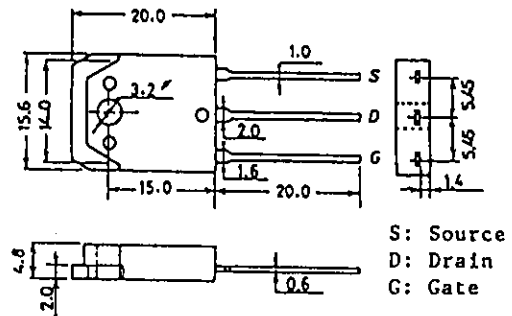
(Note) Be careful in handling the 2SK1450 because it has no protection diode between gate and source.

Switching Time Test Circuit



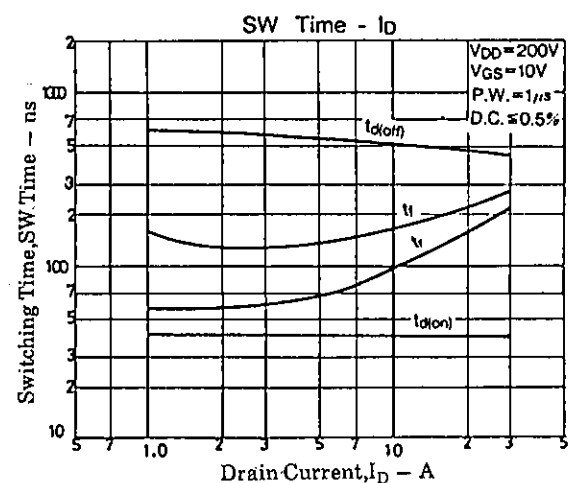
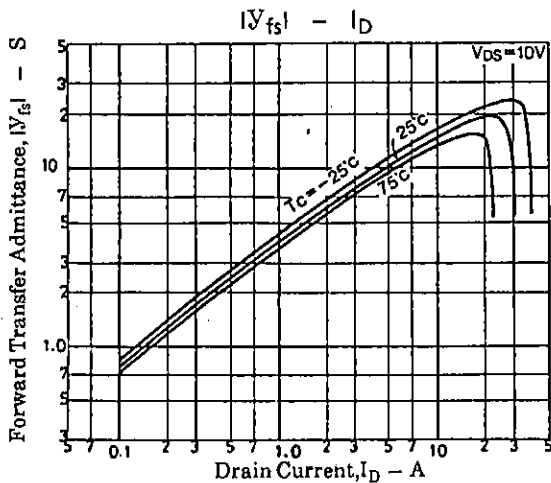
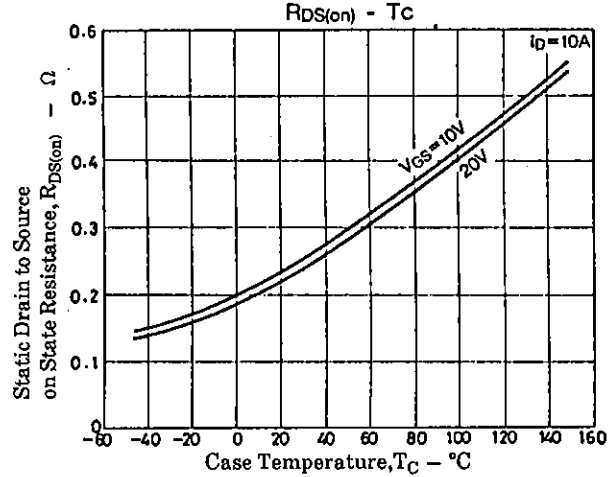
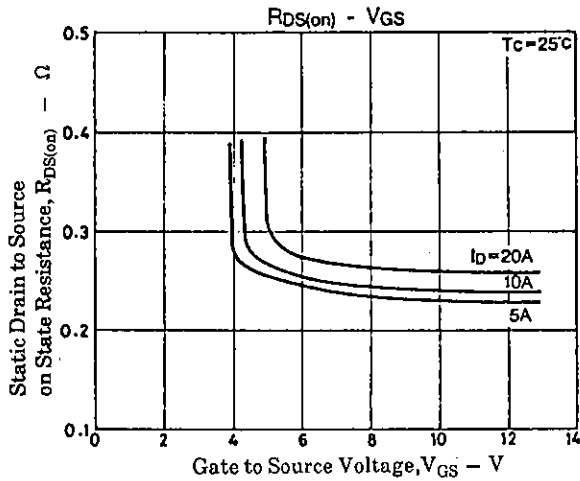
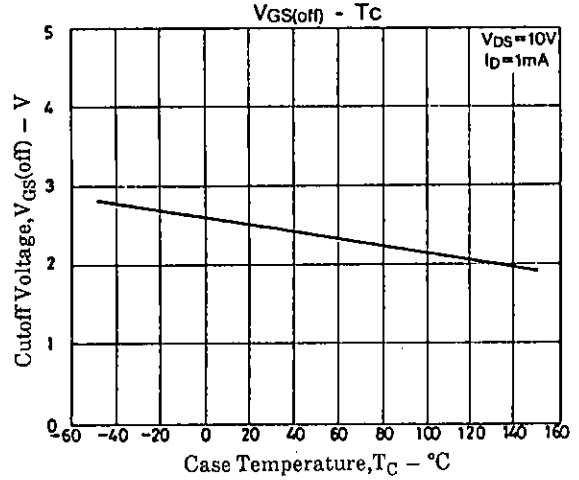
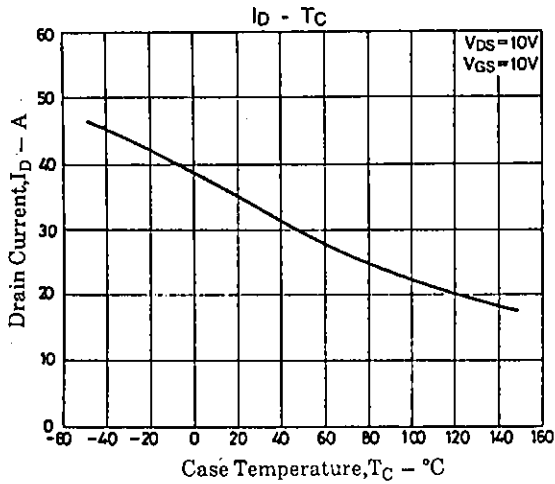
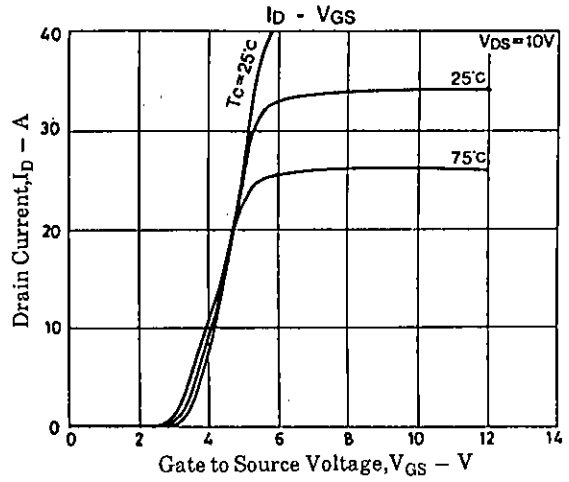
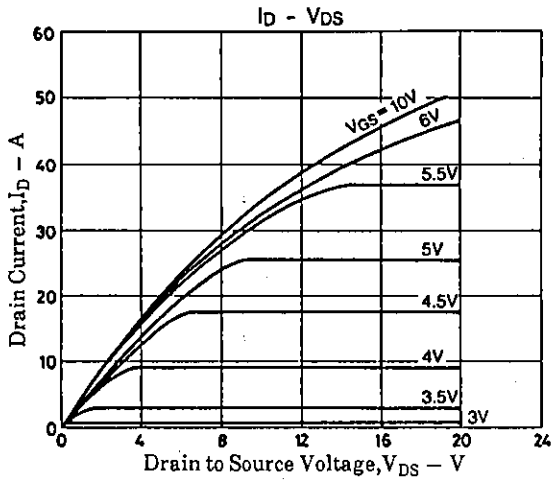
Package Dimensions 2056

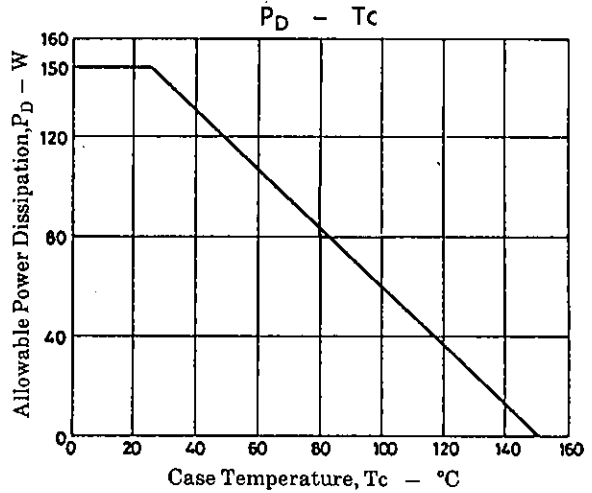
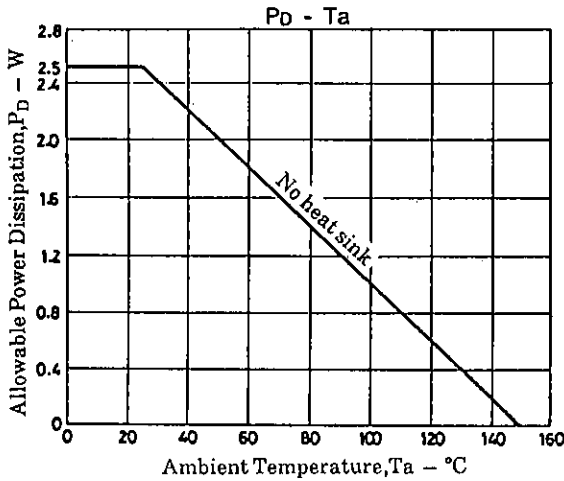
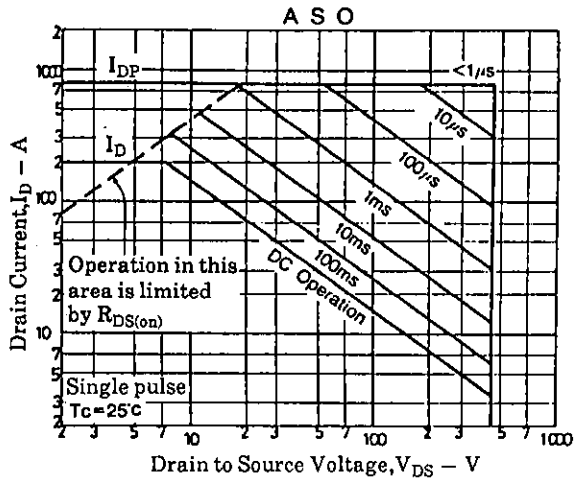
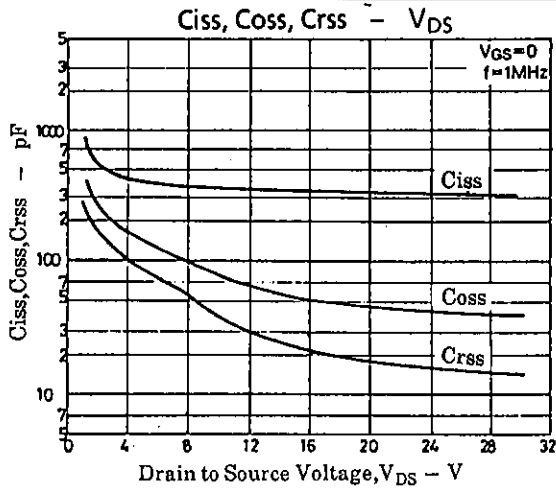
(unit : mm)



SANYO: TO3PB

2SK1450





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