

SANYO

2SK2058

Ultrahigh-Speed Switching Applications

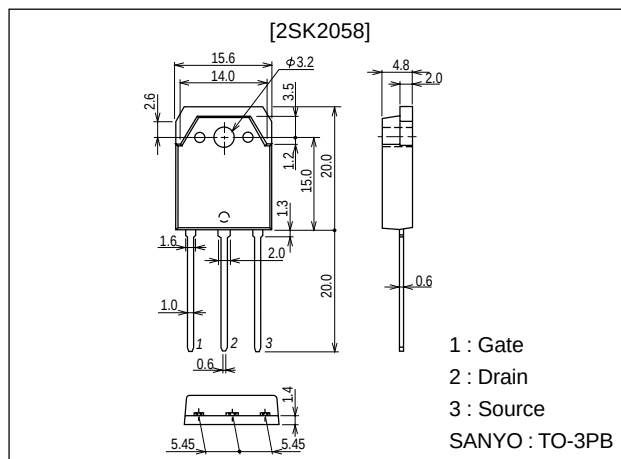
Features

- Low ON resistance.
- Ultrahigh-speed switching.
- Low-voltage drive.

Package Dimensions

unit:mm

2056A



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		250	V
Gate-to-Source Voltage	V_{GSS}		± 30	V
Drain Current (DC)	I_D		25	A
Drain Current (pulse)	I_{DP}	$PW \leq 10\mu s$, duty cycle $\leq 1\%$	100	A
Allowable Power Dissipation	P_D		2.5	W
		$T_c = 25^\circ C$	120	W
Channel Temperature	T_{ch}		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1mA, V_{GS}=0$	250			V
Gate-to-Source Breakdown Voltage	$V_{(BR)GSS}$	$I_G=\pm 100\mu A, V_{DS}=0$	± 30			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=250V, V_{GS}=0$			100	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 25V, V_{DS}=0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V, I_D=1mA$	1.5		2.5	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, I_D=12A$	11	18		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$I_D=12A, V_{GS}=10V$		0.12	0.16	Ω

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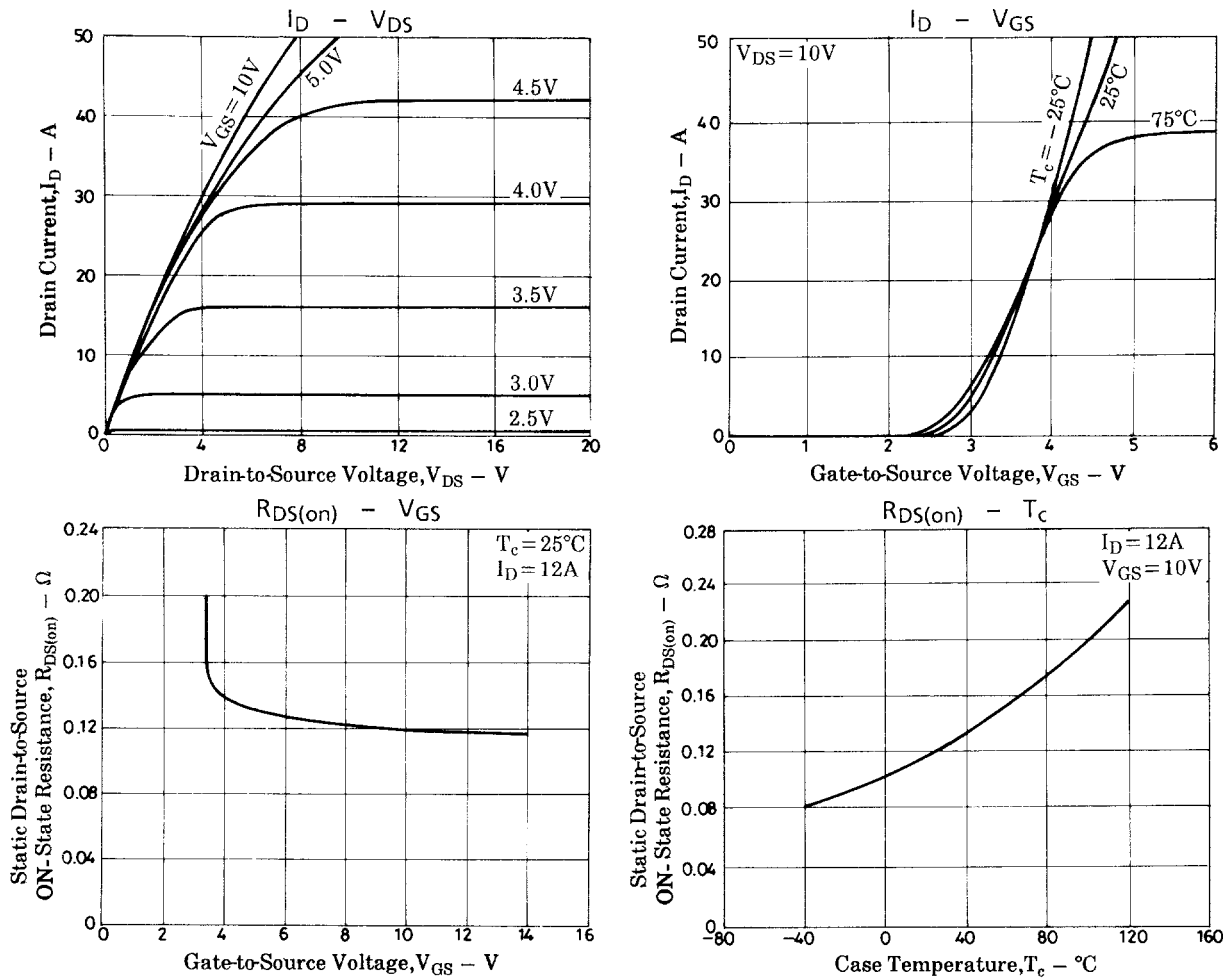
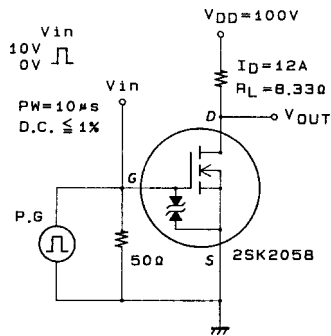
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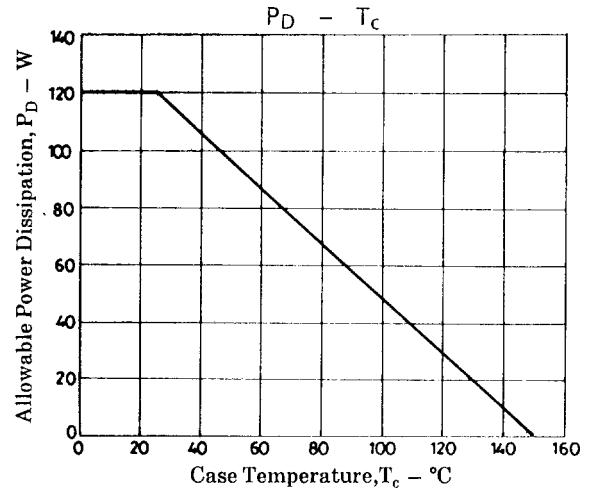
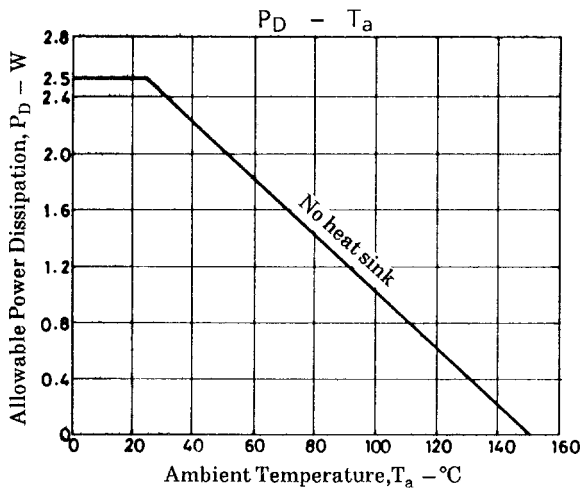
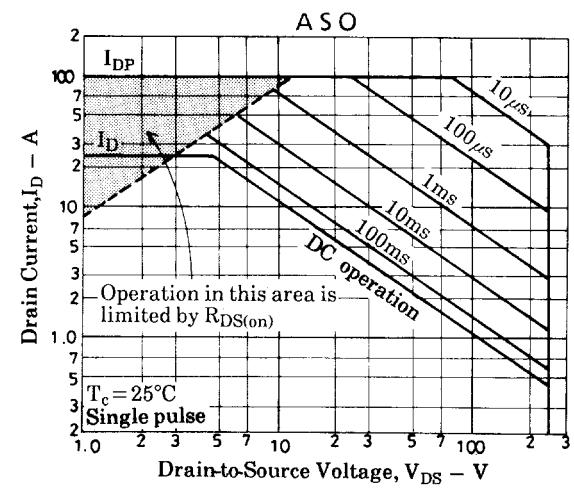
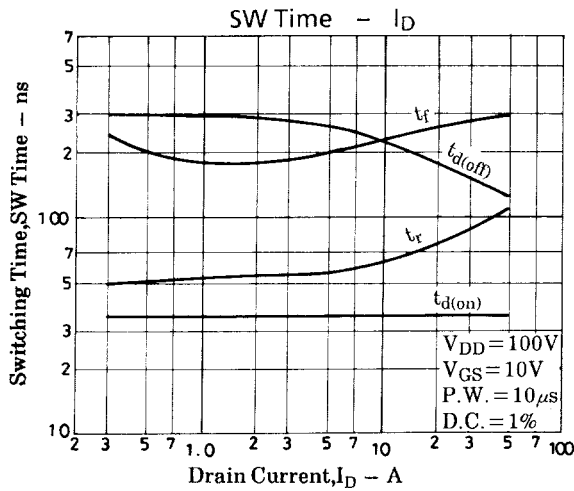
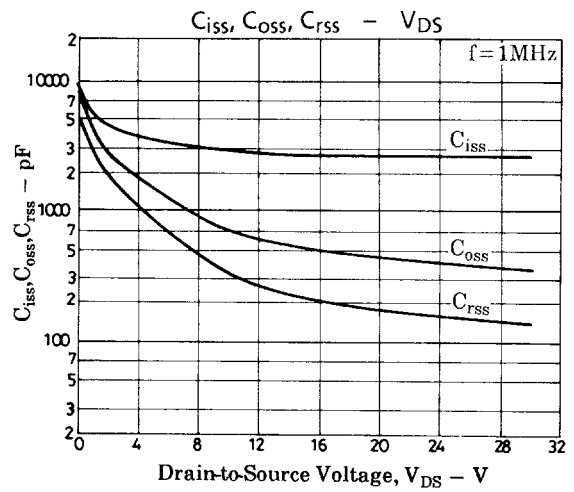
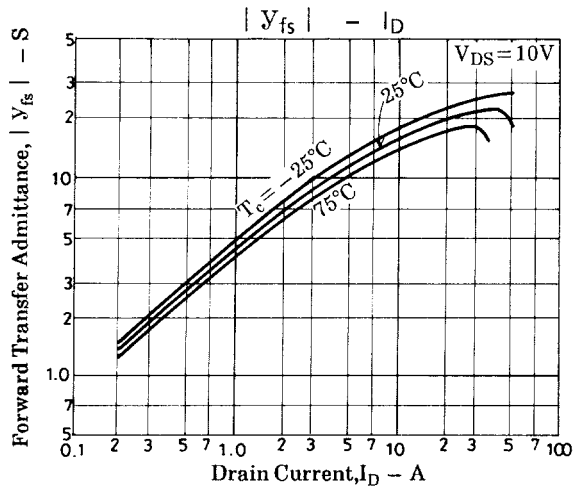
71599TH (KT)/51193TH (KOTO) AX-9099 No.4315-1/4

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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	$V_{DS}=20V, f=1MHz$		2700		pF
Output Capacitance	Coss	$V_{DS}=20V, f=1MHz$		450		pF
Reverse Transfer Capacitance	Crss	$V_{DS}=20V, f=1MHz$		180		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		35		ns
Rise Time	t_r	See specified Test Circuit		65		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		210		ns
Fall Time	t_f	See specified Test Circuit		235		ns
Diode Forward Voltage	V_{SD}	$I_S=25A, V_{GS}=0$		1.0	1.5	V

Switching Time Test Circuit





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