

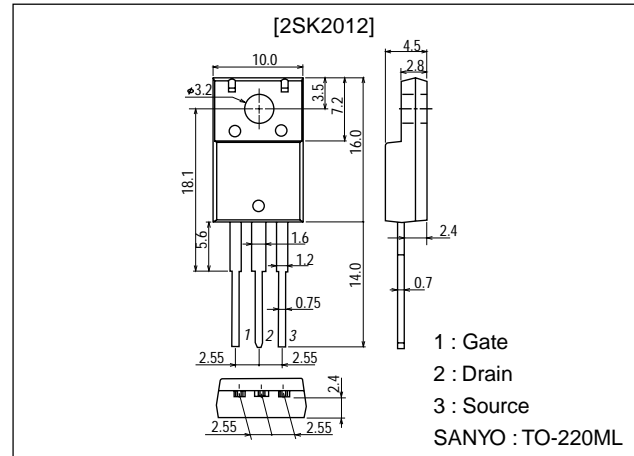
**2SK2012****Ultrahigh-Speed Switching Applications****Features**

- Low ON resistance.
- Ultrahigh-speed switching.
- Low-voltage drive.
- Micaless package facilitating mounting.

Package Dimensions

unit:mm

2063A

**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_{GS}		± 30	V
Drain Current (DC)	I_D		18	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu s$, duty cycle $\leq 1\%$	72	A
Allowable Power Dissipation	P_D		2.0	W
		$T_c = 25^\circ C$	40	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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■ SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

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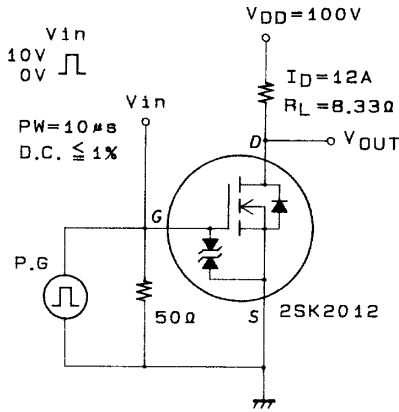
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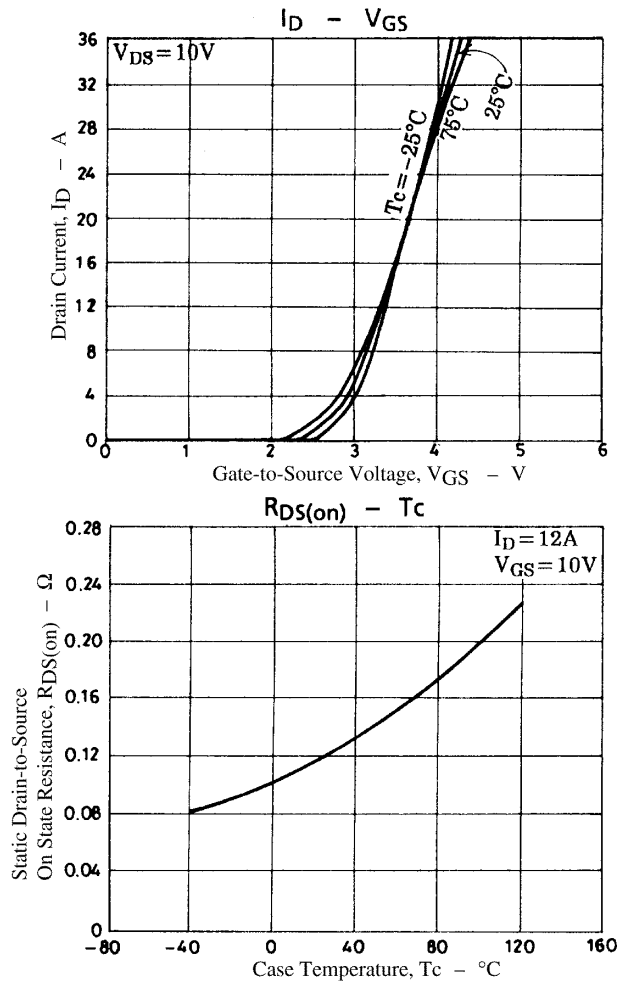
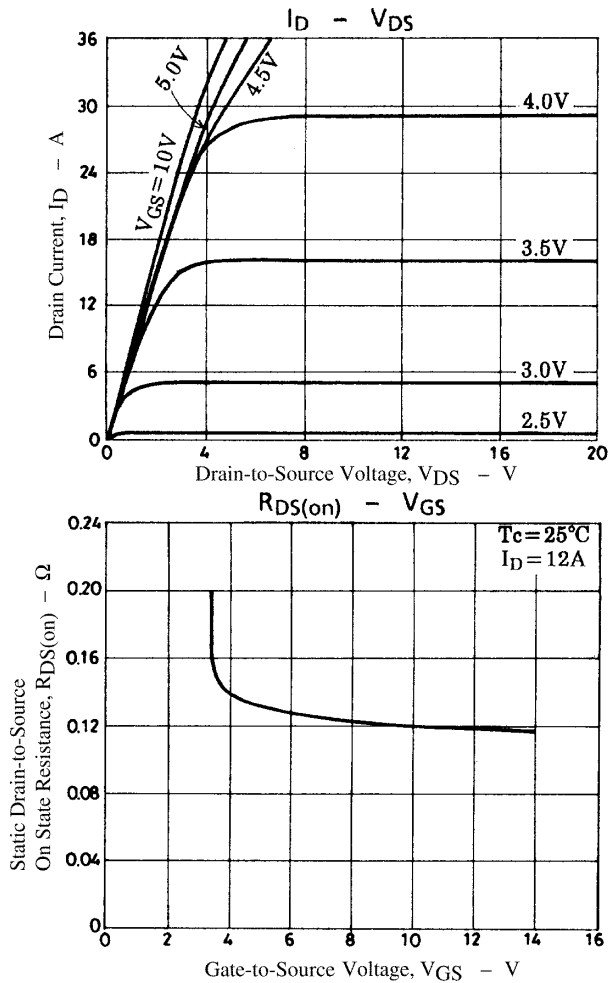
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	C_{iss}	$V_{DS}=20V, f=1MHz$		2700		pF
Output Capacitance	C_{oss}	$V_{DS}=20V, f=1MHz$		450		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=20V, f=1MHz$		180		pF
Turn-ON 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}	$I_S=18A, V_{GS}=0$		1.0	1.5	V

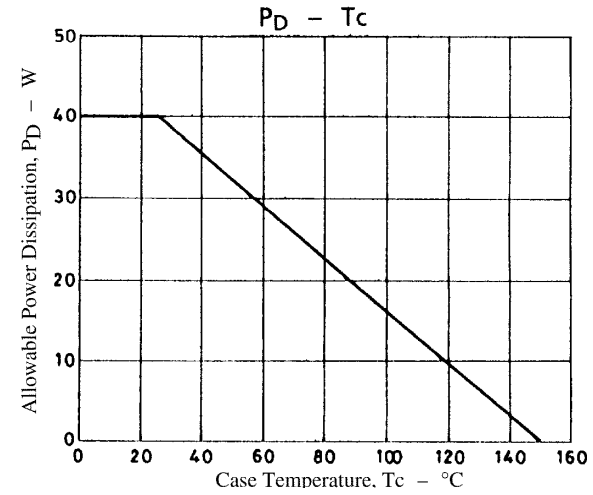
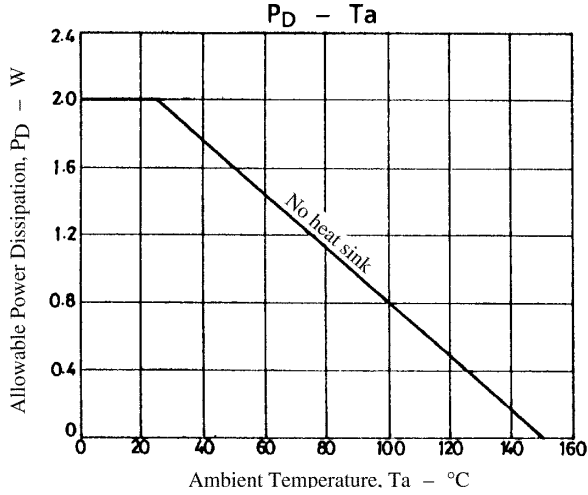
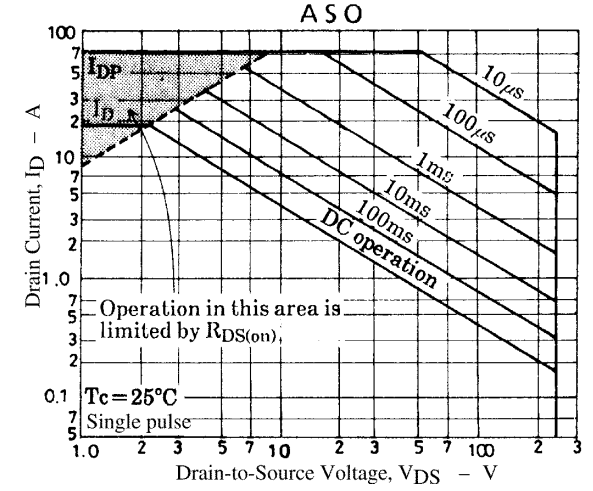
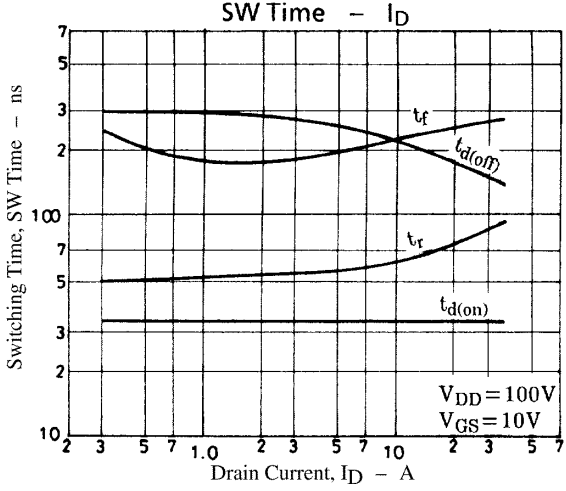
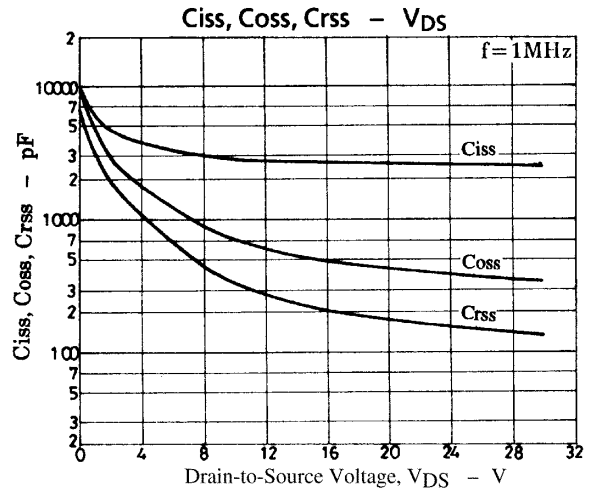
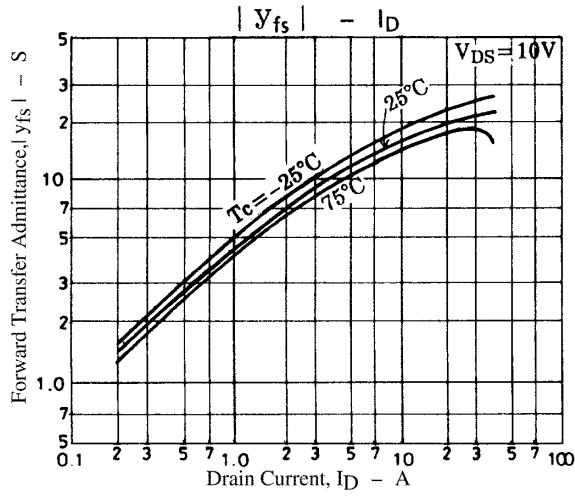
Switching Time Test Circuit



A01116



2SK2012



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