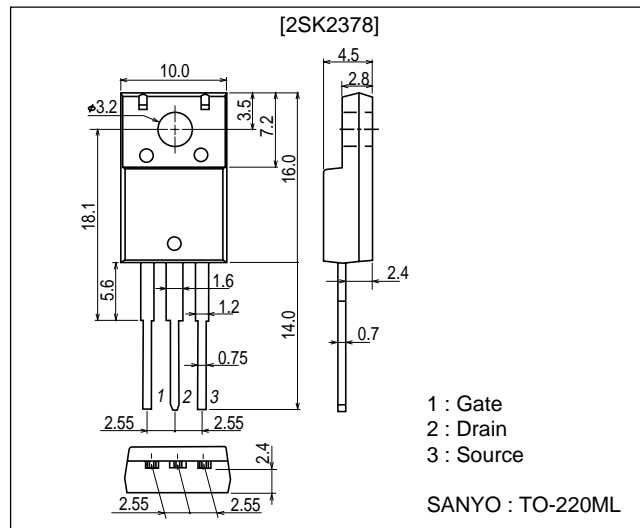


SANYO**Ultrahigh-Speed Switching Applications****Features**

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

Package Dimensions

unit : mm
2063A

**Specifications****Absolute Maximum Ratings** at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DS}		200	V
Gate-to-Source Voltage	V_{GS}		± 20	V
Drain Current (DC)	I_D		13	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$	52	A
Allowable Power Dissipation	PD		2.0	W
		$T_c=25^\circ\text{C}$	30	W
Channel Temperature	T_{ch}		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Electrical Characteristics at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1\text{mA}$, $V_{GS}=0$	200			V
Gate-to-Source Breakdown Voltage	$V_{(BR)GSS}$	$I_G=\pm 100\mu\text{A}$, $V_{DS}=0$	± 20			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=200\text{V}$, $V_{GS}=0$			100	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 16\text{V}$, $V_{DS}=0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}$, $I_D=1\text{mA}$	1.5		2.5	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10\text{V}$, $I_D=7\text{A}$	5	8.5		S

Continued on next page.

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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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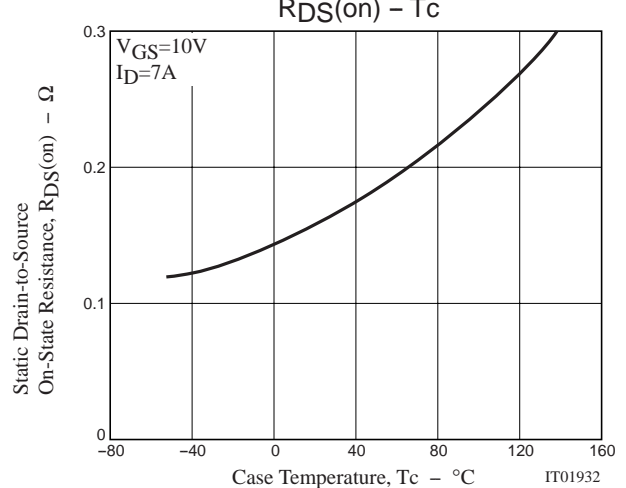
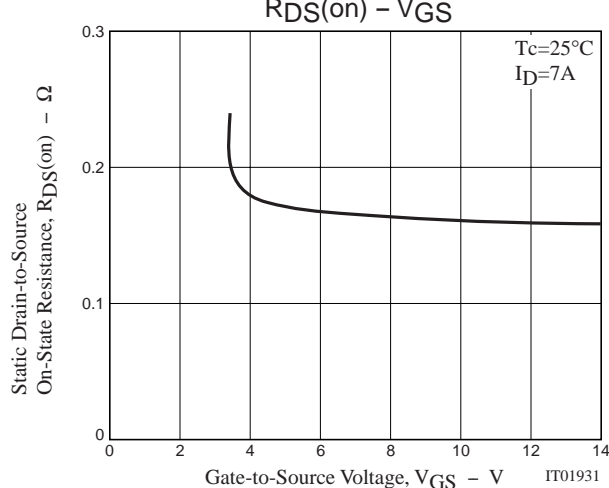
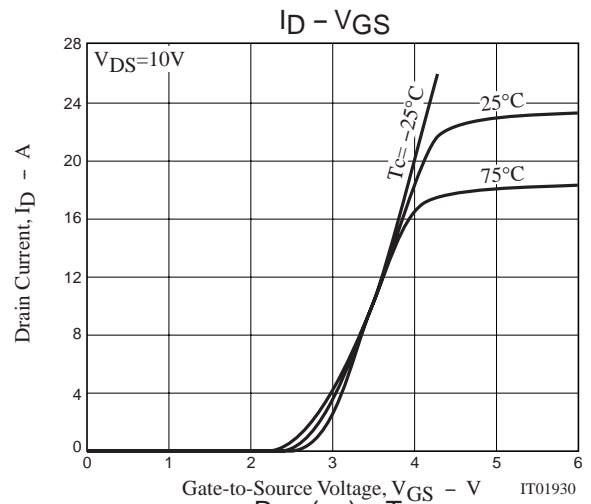
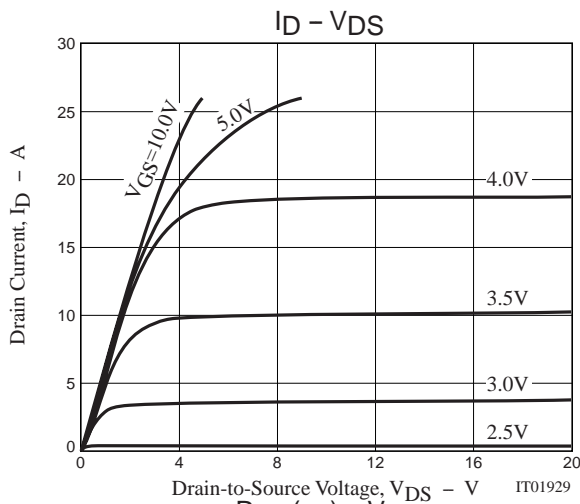
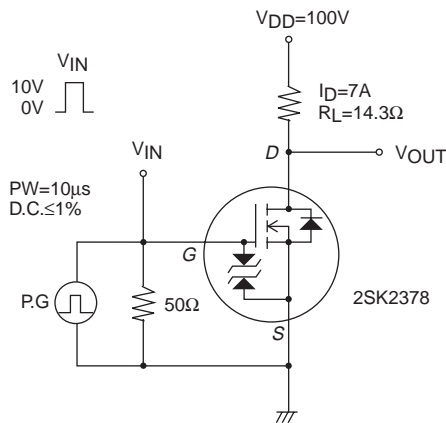
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Continued from preceding page.

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$I_D=7A, V_{GS}=10V$		160	210	$m\Omega$
Input Capacitance	C_{iss}	$V_{DS}=20V, f=1MHz$		1100		pF
Output Capacitance	C_{oss}	$V_{DS}=20V, f=1MHz$		240		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=20V, f=1MHz$		95		pF
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit		20		ns
Rise Time	t_r	See specified Test Circuit		50		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit		340		ns
Fall Time	t_f	See specified Test Circuit		140		ns
Diode Forward Voltage	V_{SD}	$I_S=13A, V_{GS}=0$		1.0	1.5	V

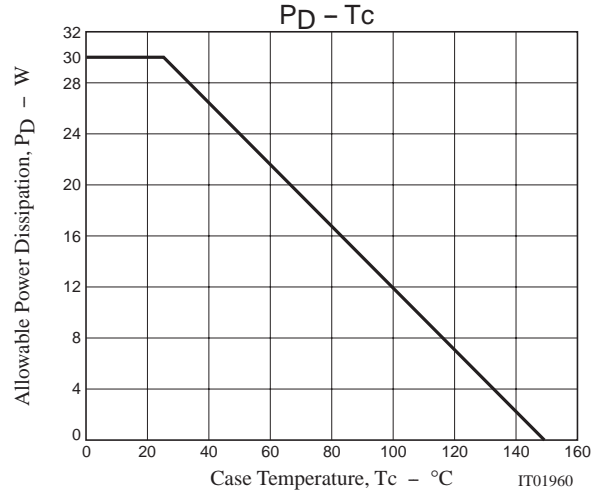
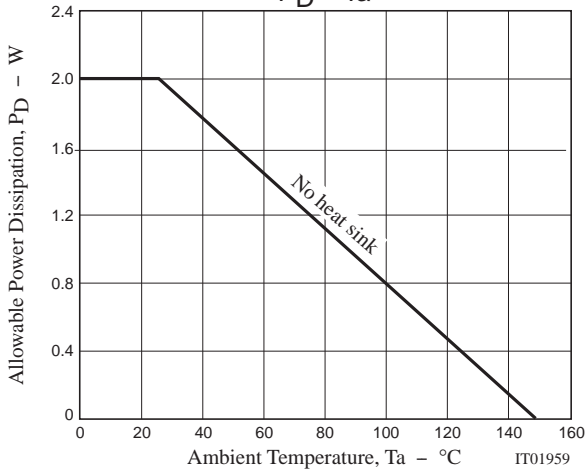
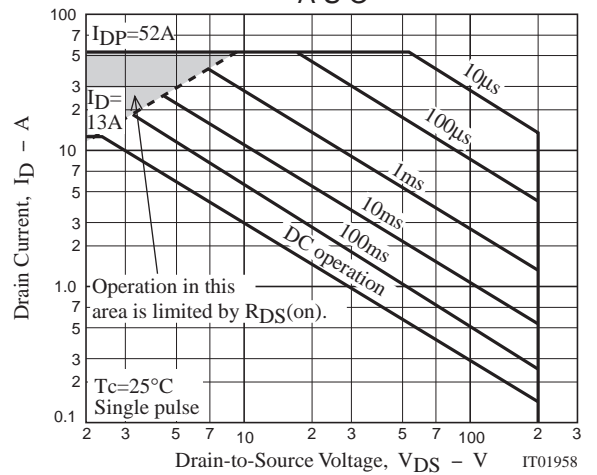
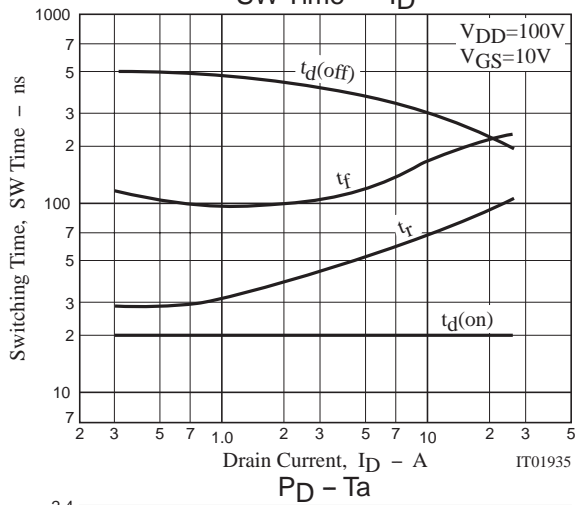
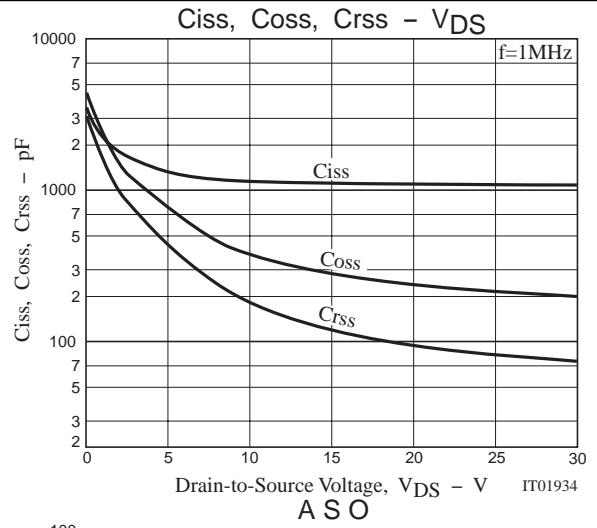
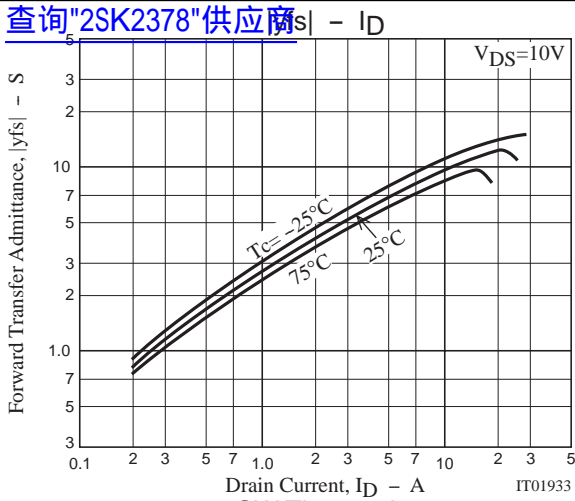
Marking : K2378

Switching Time Test Circuit



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