

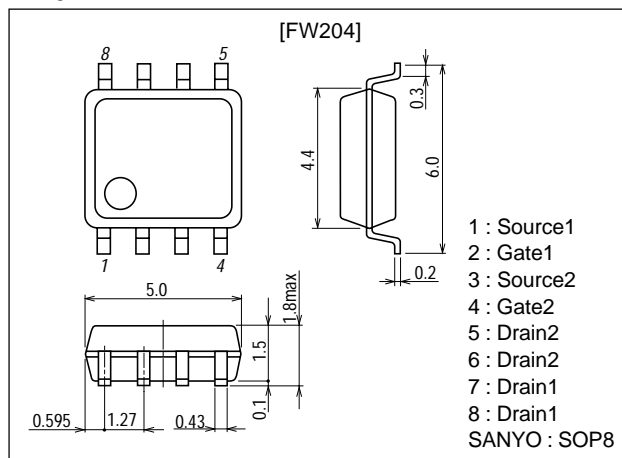
SANYO**Ultrahigh-Speed Switching Applications****Features**

- Low ON resistance.
- Ultrahigh-speed switching.
- Composite type with 2 N-channel MOSFETs driving from a 2.5V supply voltage contained in a single package, facilitating high-density mounting.
- Matched pair capability.

Package Dimensions

unit:mm

2129

**Specifications****Absolute Maximum Ratings** at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		20	V
Gate-to-Source Voltage	V_{GSS}		±10	V
Drain Current (DC)	I_D		2	A
Drain Current (pulse)	I_{DP}	$PW \leq 10\mu s$, duty cycle $\leq 1\%$	8	A
Allowable Power Dissipation	P_D	Mounted on a ceramic board (1200mm ² ×0.8mm) 1unit	1.6	W
Total Dissipation	P_T	Mounted on a ceramic board (1200mm ² ×0.8mm)	1.8	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1mA$, $V_{GS}=0$	20			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=20V$, $V_{GS}=0$			100	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 8V$, $V_{DS}=0$			±10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V$, $I_D=1mA$	0.5		1.5	V
Forward Transfer Admittance	yfs	$V_{DS}=10V$, $I_D=1A$	1.8	2.8		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=1A$, $V_{GS}=4V$		140	200	mΩ
	$R_{DS(on)2}$	$I_D=0.5A$, $V_{GS}=2.5V$		200	320	mΩ

Marking : W204

Continued on next page.

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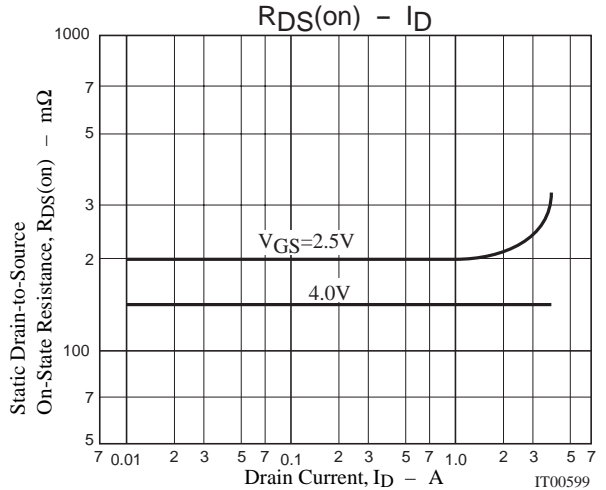
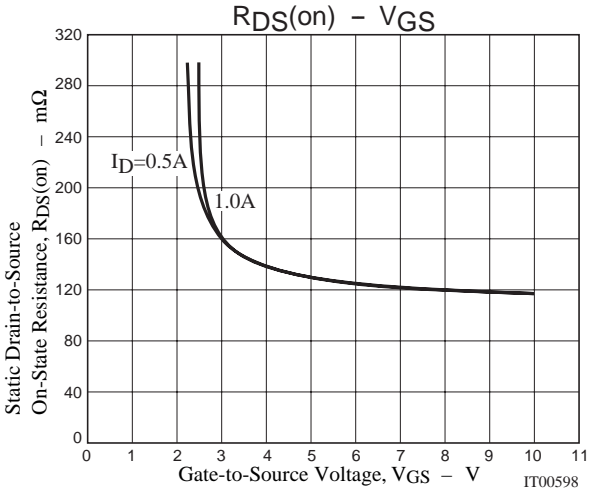
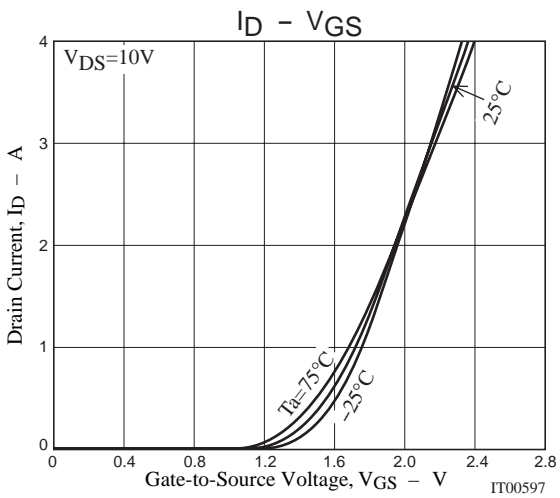
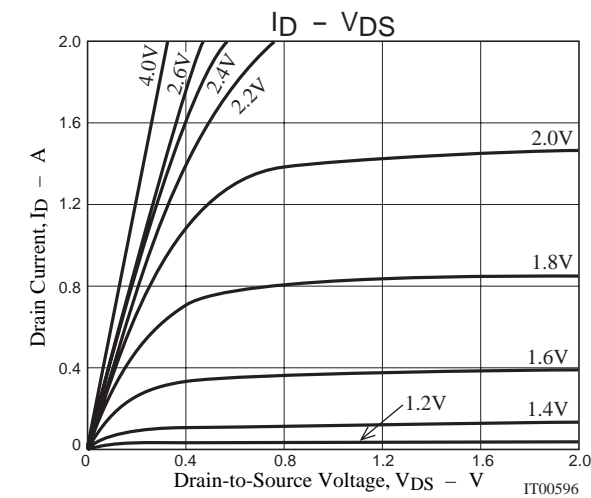
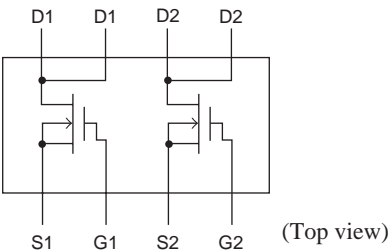
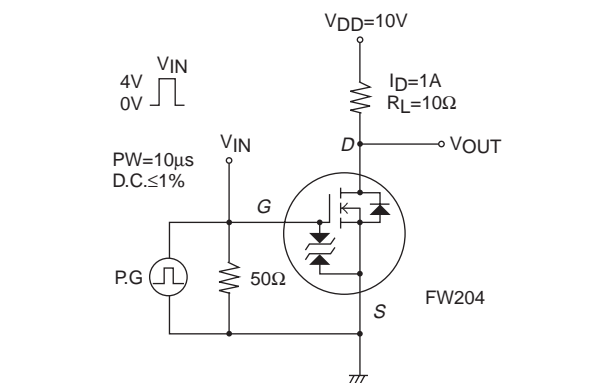
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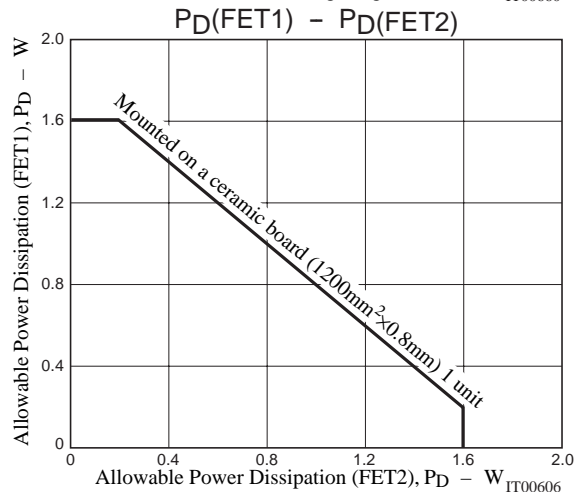
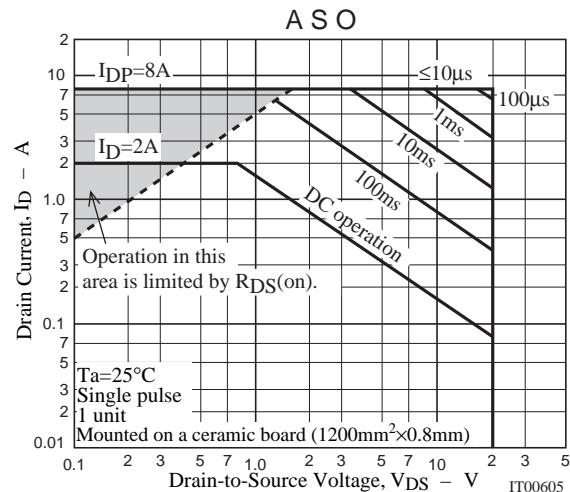
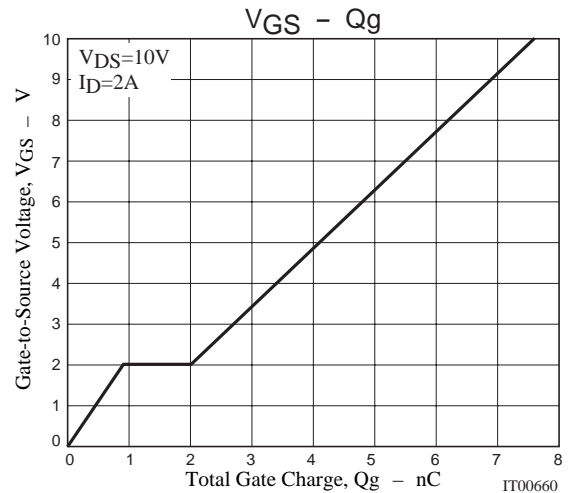
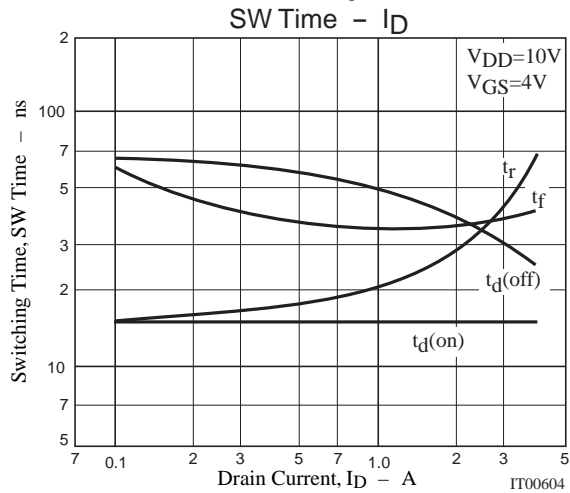
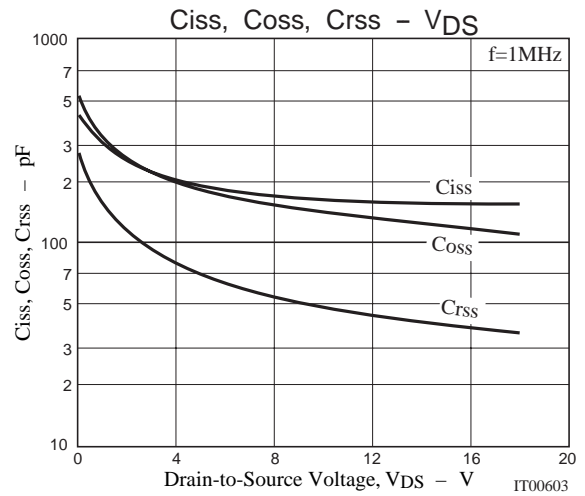
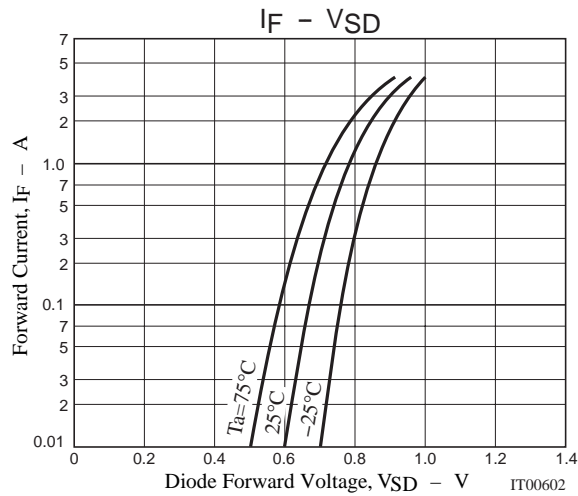
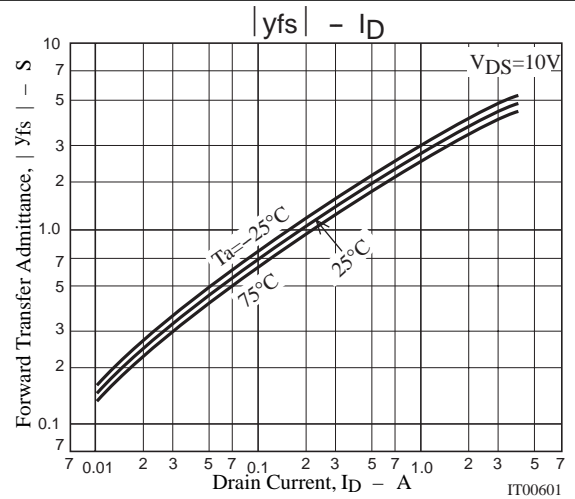
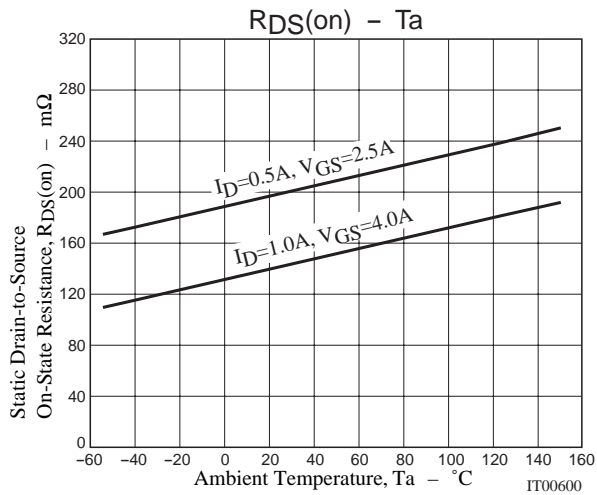
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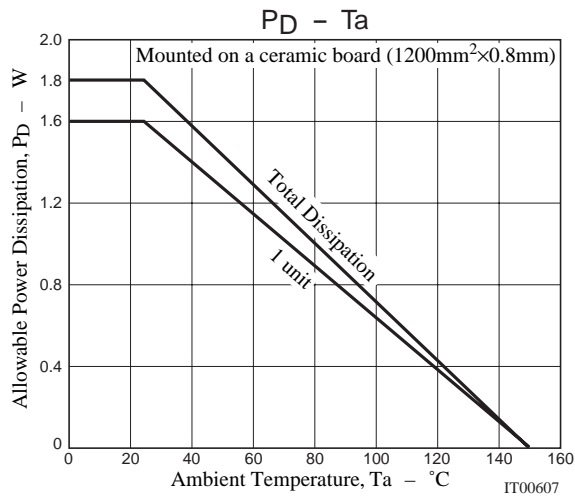
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	$V_{DS}=10V, f=1MHz$		170		pF
Output Capacitance	Coss	$V_{DS}=10V, f=1MHz$		145		pF
Reverse Transfer Capacitance	Crss	$V_{DS}=10V, f=1MHz$		50		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		15		ns
Rise Time	t_r	See specified Test Circuit		20		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		50		ns
Fall Time	t_f	See specified Test Circuit		35		ns
Total Gate Charge	Qg	$V_{DS}=10V, V_{GS}=10V, I_D=2A$		7.6		nC
Gate-to-Source Charge	Qgs	$V_{DS}=10V, V_{GS}=10V, I_D=2A$		0.9		nC
Gate-to-Drain "Miller" Charge	Qgd	$V_{DS}=10V, V_{GS}=10V, I_D=2A$		1.1		nC
Diode Forward Voltage	V_{SD}	$I_S=2A, V_{GS}=0$		0.8	1.2	V

Switching Time Test Circuit

Electrical Connection







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