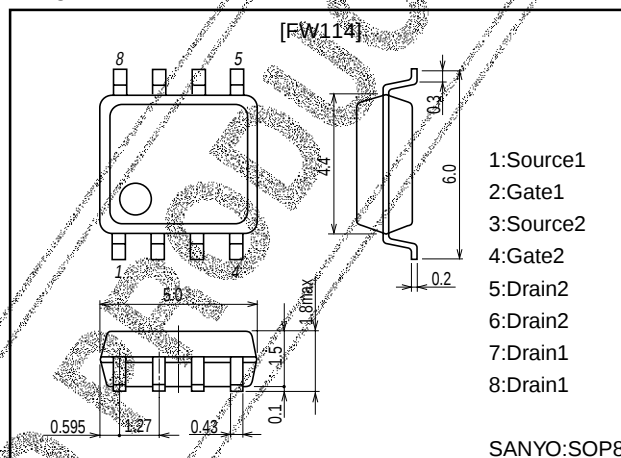


SANYO**FW114****S/W Load Applications****Features**

- Low ON resistance.
- 2.5V drive.

Package Dimensions

unit:mm

2129**Specifications****Absolute Maximum Ratings** at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DS}		-20	V
Gate-to-Source Voltage	V_{GS}		± 10	V
Drain Current (DC)	I_D		-3	A
Drain Current (pulse)	I_{DP}	$PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$	-32	A
Allowable Power Dissipation	P_D	Mounted on ceramic board (1000mm ² ×0.8mm) 1unit	1.7	W
Total Dissipation	P_T	Mounted on ceramic board (1000mm ² ×0.8mm)	2.0	W
Channel Temperature	T_{ch}		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

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

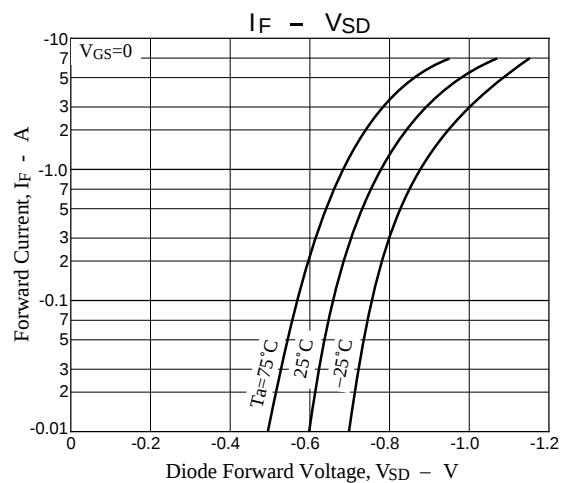
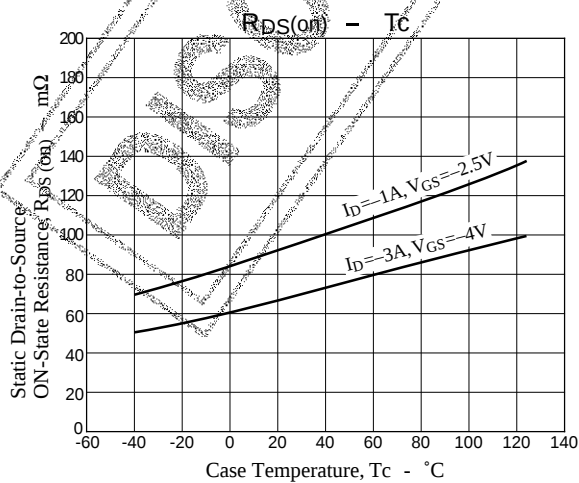
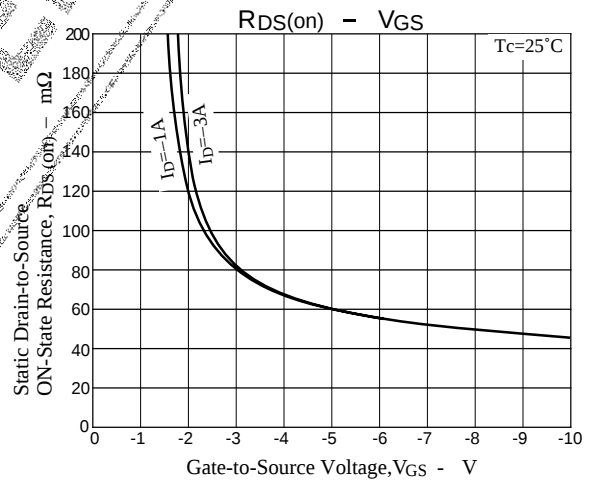
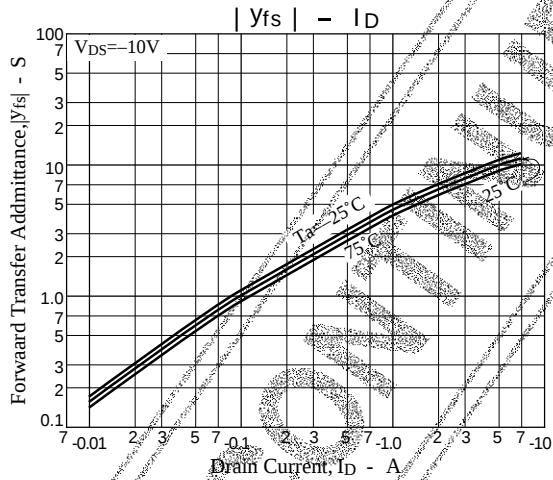
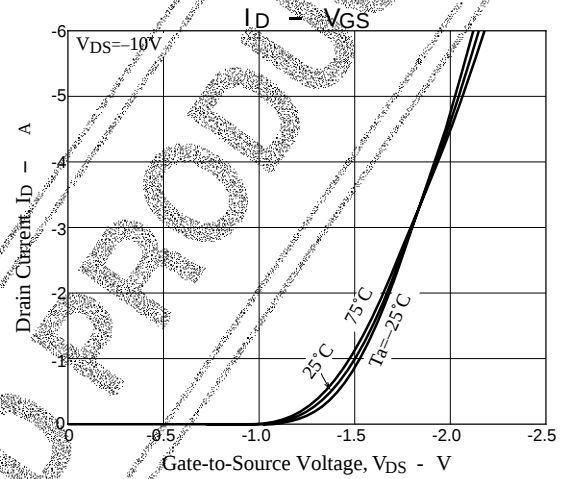
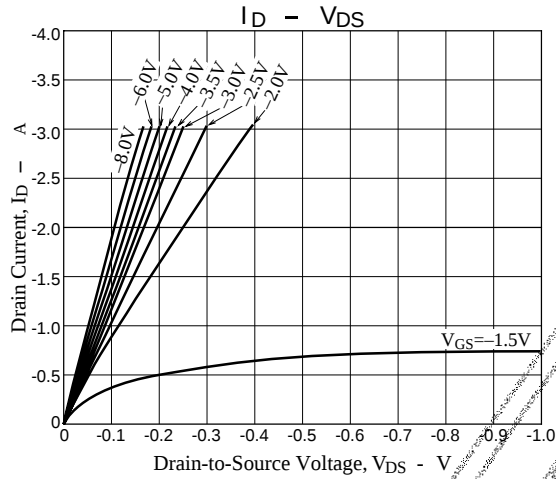
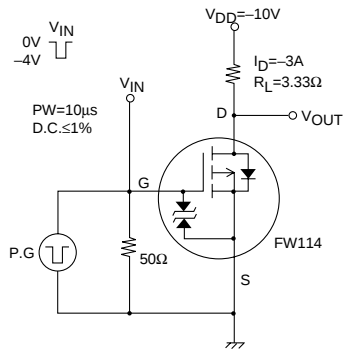
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
D-S Breakdown Voltage	$V_{(BR)DS}$	$I_D = -1\text{mA}$, $V_{GS} = 0$	-20			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -20\text{V}$, $V_{GS} = 0$			-100	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 8\text{V}$, $V_{DS} = 0$			± 10	μA
Cutoff Current	$I_{GSS(off)}$	$V_{DS} = -10\text{V}$, $I_D = -1\text{mA}$	-0.4		-1.4	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = -10\text{V}$, $I_D = -3\text{A}$	5	8		S
Static Drain-to-Source ON-State Resistance	$R_{DS(on)1}$	$I_D = -3\text{A}$, $V_{GS} = -4\text{V}$		70	90	$\text{m}\Omega$
	$R_{DS(on)2}$	$I_D = -1\text{A}$, $V_{GS} = -2.5\text{V}$		92	130	$\text{m}\Omega$
Input Capacitance	C_{iss}	$V_{DS} = -10\text{V}$, $f = 1\text{MHz}$		600		pF
Output Capacitance	C_{oss}	$V_{DS} = -10\text{V}$, $f = 1\text{MHz}$		300		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = -10\text{V}$, $f = 1\text{MHz}$		150		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		15		ns
Rise Time	t_r	See specified Test Circuit		140		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		80		ns
Fall Time	t_f	See specified Test Circuit		85		ns
Total Gate Charge	Q_g	$V_{DS} = -10\text{V}$, $V_{GS} = -10\text{V}$, $I_D = -3\text{A}$		24		nC
Gate-to-Source Charge	Q_{gs}	$V_{DS} = -10\text{V}$, $V_{GS} = -10\text{V}$, $I_D = -3\text{A}$		3		nC
Gate-to-Drain ("Miller") Charge	Q_{gd}	$V_{DS} = -10\text{V}$, $V_{GS} = -10\text{V}$, $I_D = -3\text{A}$		6		nC
Diode Forward Voltage	V_{SD}	$I_S = -3\text{A}$, $V_{GS} = 0$	-1.0	-1.5		V

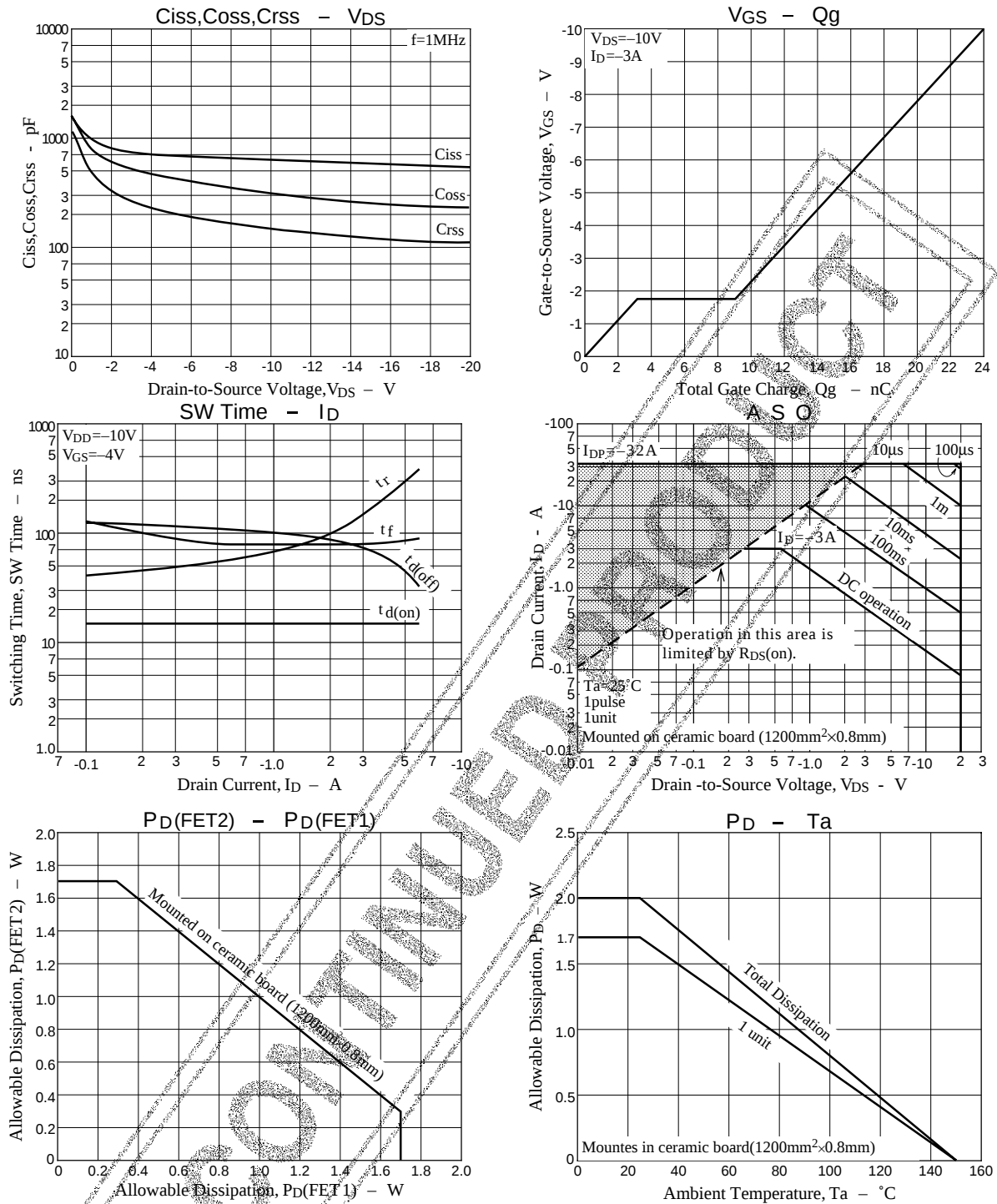
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52698TS (KOTO) TA-1217 No.5848-1/3

Switching Time Test Circuit





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