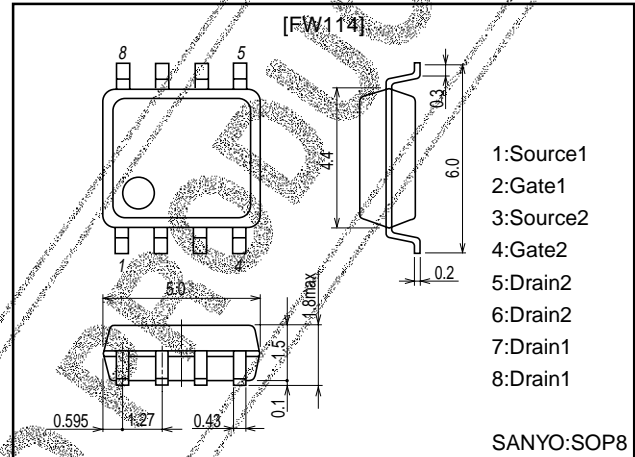


**SANYO****FW114****S/W Load Applications****Features**

- Low ON resistance.
- 2.5V drive.

**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)	$I_D$		-3	A
Drain Current (pulse)	$I_{DP}$	PW≤10μs, duty cycle≤1%	-32	A
Allowable Power Dissipation	$P_D$	Mounted on ceramic board (1000mm²×0.8mm) 1unit	1.7	W
Total Dissipation	$P_T$	Mounted on ceramic board (1000mm²×0.8mm)	2.0	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

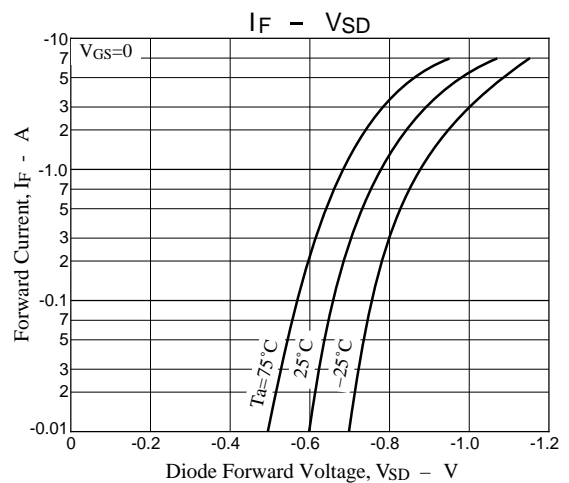
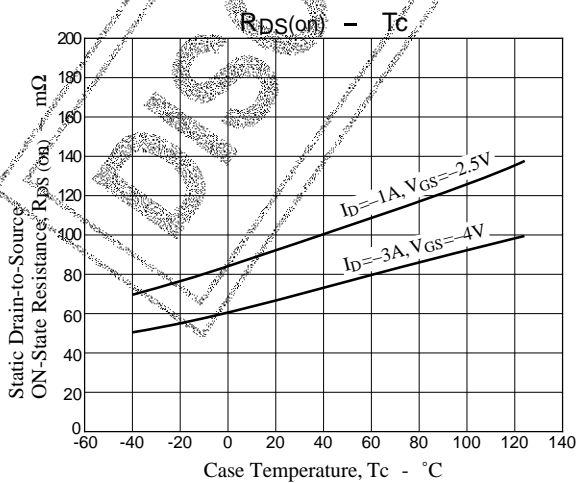
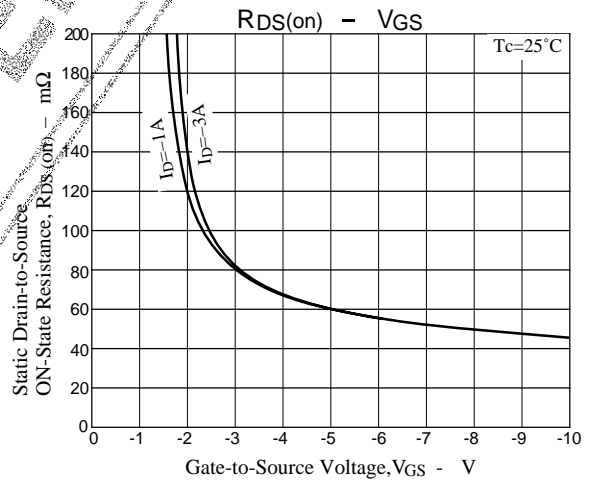
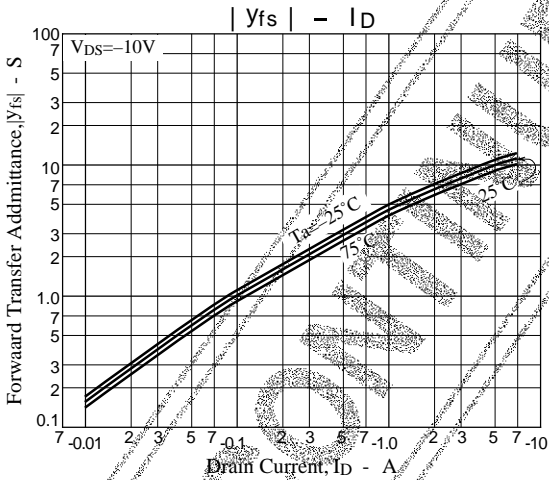
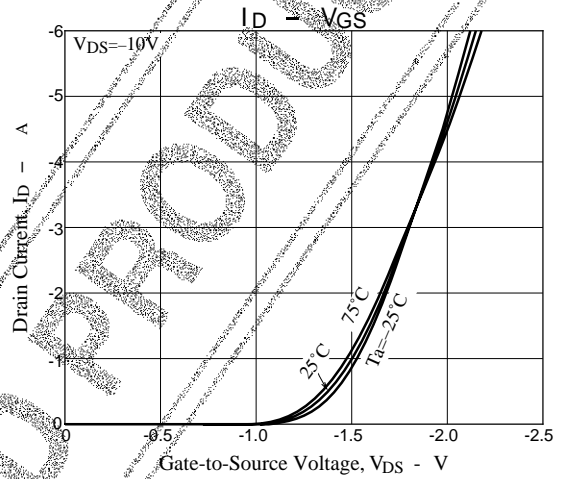
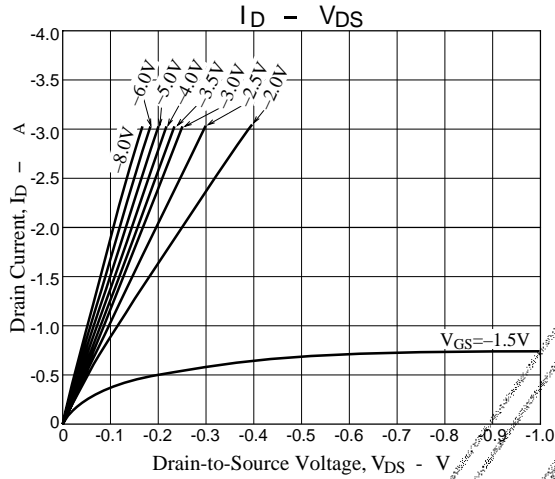
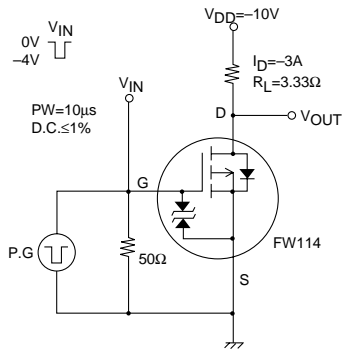
**Electrical Characteristics** at Ta = 25°C

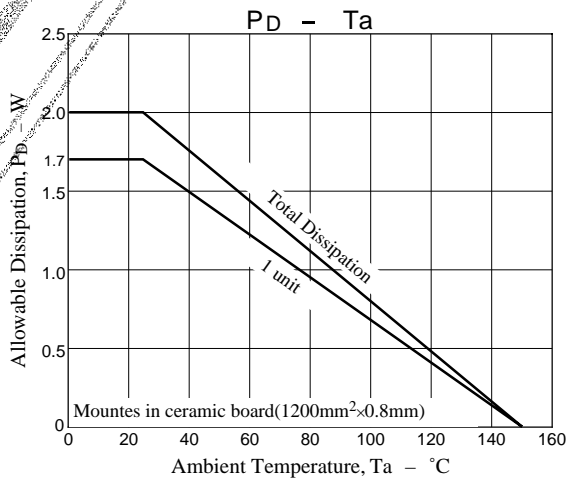
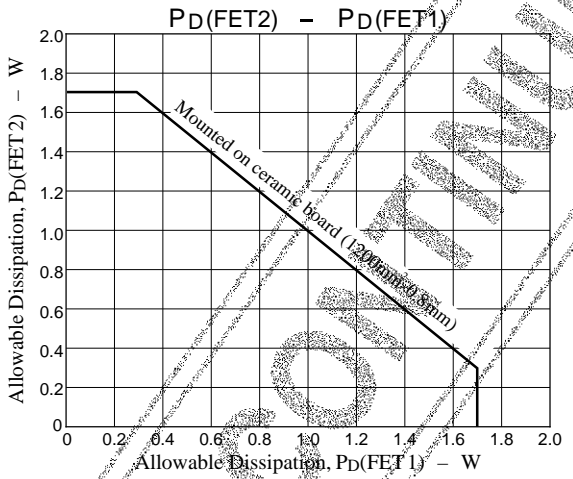
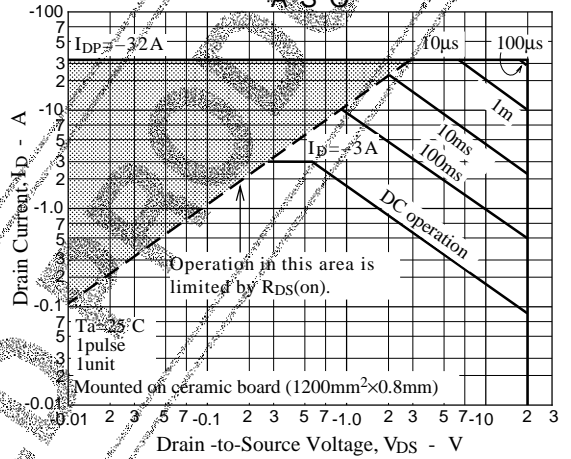
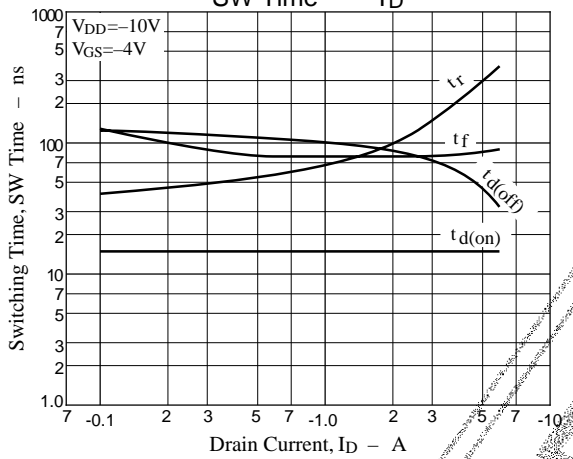
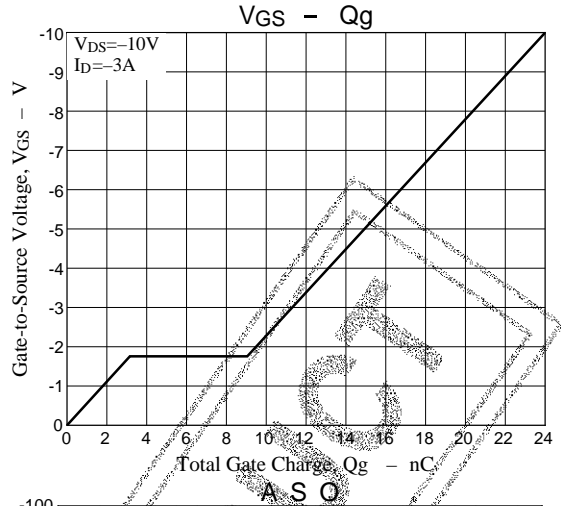
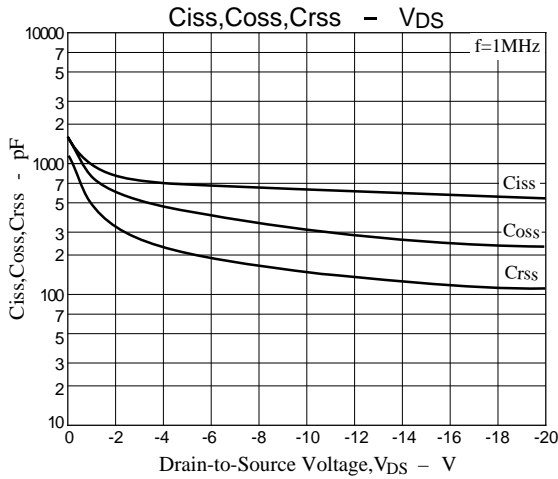
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D=-1mA, V_{GS}=0$	-20			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=-20V, V_{GS}=0$			-100	μA
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS}=\pm 8V, V_{DS}=0$			±10	μA
Cutoff Current	$V_{GS(off)}$	$V_{DS}=-10V, I_D=-1mA$	-0.4		-1.4	V
Forward Transfer Admittance	yfs	$V_{DS}=-10V, I_D=-3A$	5	8		S
Static Drain-to-Source ON-State Resistance	$R_{DS(on)1}$	$I_D=-3A, V_{GS}=-4V$		70	90	mΩ
	$R_{DS(on)2}$	$I_D=-1A, V_{GS}=-2.5V$		92	130	mΩ
Input Capacitance	Ciss	$V_{DS}=-10V, f=1MHz$		600		pF
Output Capacitance	Coss	$V_{DS}=-10V, f=1MHz$		300		pF
Reverse Transfer Capacitance	Crss	$V_{DS}=-10V, f=1MHz$		150		pF
Turn-ON Delay Time	t <sub>d(on)</sub>	See specified Test Circuit		15		ns
Rise Time	t <sub>r</sub>	See specified Test Circuit		140		ns
Turn-OFF Delay Time	t <sub>d(off)</sub>	See specified Test Circuit		80		ns
Fall Time	t <sub>f</sub>	See specified Test Circuit		85		ns
Total Gate Charge	Qg	$V_{DS}=-10V, V_{GS}=-10V, I_D=-3A$		24		nC
Gate-to-Source Charge	Qgs	$V_{DS}=-10V, V_{GS}=-10V, I_D=-3A$		3		nC
Gate-to-Drain ("Miller") Charge	Qgd	$V_{DS}=-10V, V_{GS}=-10V, I_D=-3A$		6		nC
Diode Forward Voltage	$V_{SD}$	$I_S=-3A, V_{GS}=0$	-1.0	-1.5		V

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Switching Time Test Circuit





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