

**SANYO**

No.3816

**2SJ231**

P-Channel MOS Silicon FET

Very High-Speed Switching Applications

**Features**

- Small ON resistance.
- Very high-speed switching.
- Low-voltage drive.
- Meets radial taping.

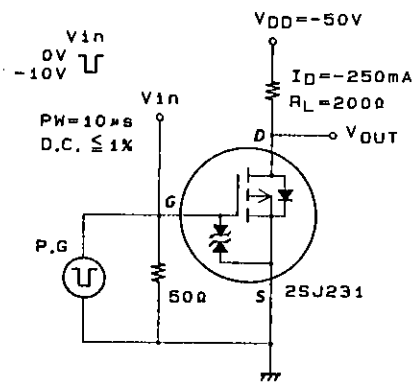
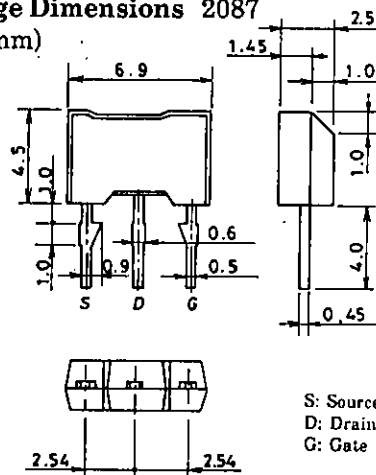
**Absolute Maximum Ratings at  $T_a = 25^\circ\text{C}$** 

			unit
Drain to Source Voltage	$V_{DSS}$	-100	V
Gate to Source Voltage	$V_{GSS}$	$\pm 15$	V
Drain Current (DC)	$I_D$	-0.5	A
Drain Current (Pulse)	$I_{DP}$	-2	A
Allowable Power Dissipation	$P_D$	1	W
Channel Temperature	$T_{ch}$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

$PW \leq 10\mu\text{s}$ , duty cycle  $\leq 1\%$

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

			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = -1\text{mA}$ , $V_{GS} = 0$	-100			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = -100\text{V}$ , $V_{GS} = 0$			-100	$\mu\text{A}$
Gate to Source Leakage Current	$I_{GSS}$	$V_{GS} = \pm 12\text{V}$ , $V_{DS} = 0$			$\pm 10$	$\mu\text{A}$
Cutoff Current	$V_{GS(off)}$	$V_{DS} = -10\text{V}$ , $I_D = -1\text{mA}$	-1.0		-2.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = -10\text{V}$ , $I_D = -250\text{mA}$	400	700		mS
Static Drain to Source on State Resistance	$R_{DS(on)}$	$I_D = -250\text{mA}$ , $V_{GS} = -10\text{V}$		1.8	2.4	$\Omega$
	$R_{DS(on)}$	$I_D = -250\text{mA}$ , $V_{GS} = -4\text{V}$		2.4	3.5	$\Omega$
Input Capacitance	$C_{iss}$	$V_{DS} = -20\text{V}$ , $f = 1\text{MHz}$		160		pF
Output Capacitance	$C_{oss}$	$V_{DS} = -20\text{V}$ , $f = 1\text{MHz}$		40		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = -20\text{V}$ , $f = 1\text{MHz}$		6		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		10		ns
Rise Time	$t_r$	"		12		ns
Turn-OFF Delay Time	$t_{d(off)}$	"		80		ns
Fall Time	$t_f$	"		40		ns
Diode Forward Voltage	$V_{SD}$	$I_S = -500\text{mA}$ , $V_{GS} = 0$		-0.9		V

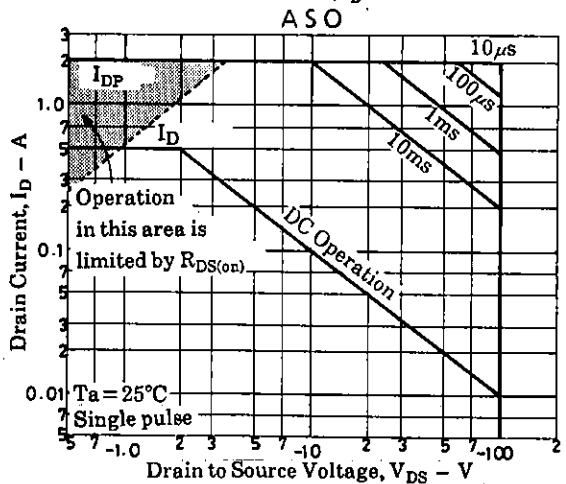
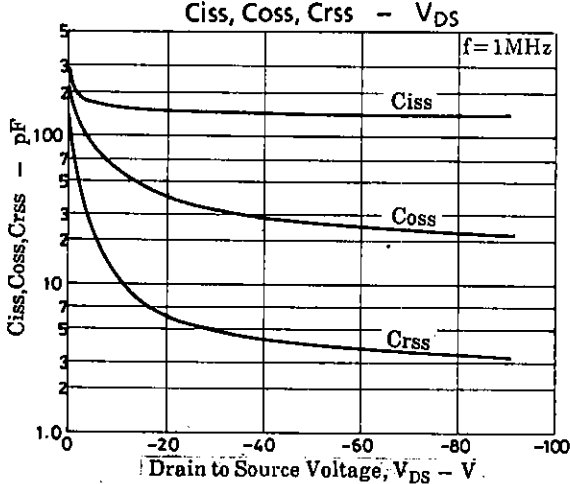
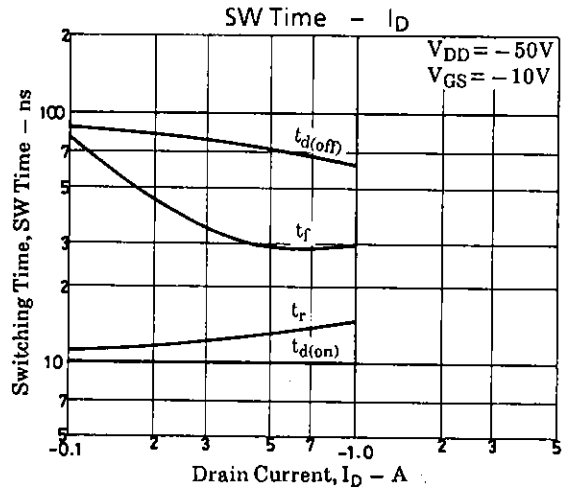
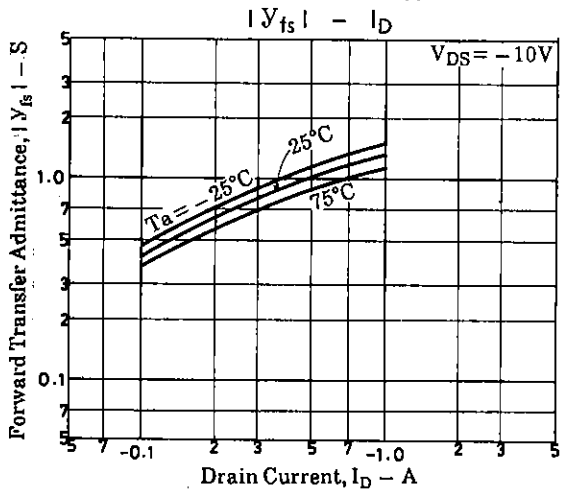
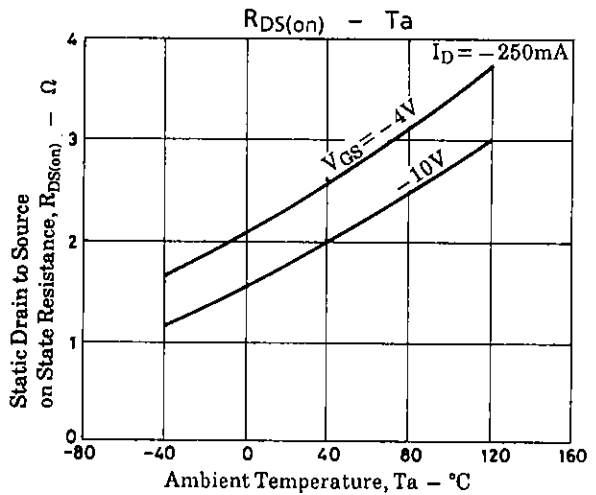
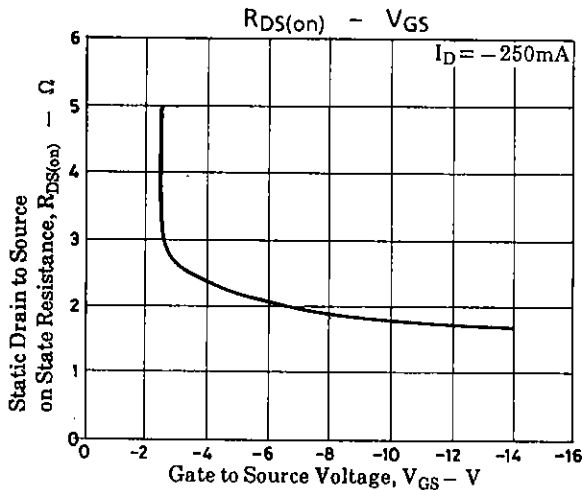
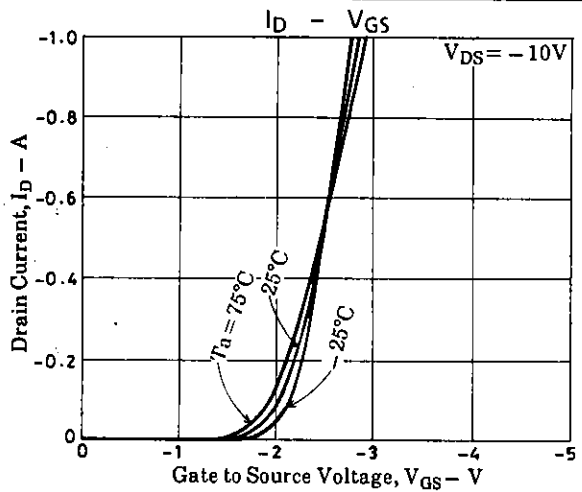
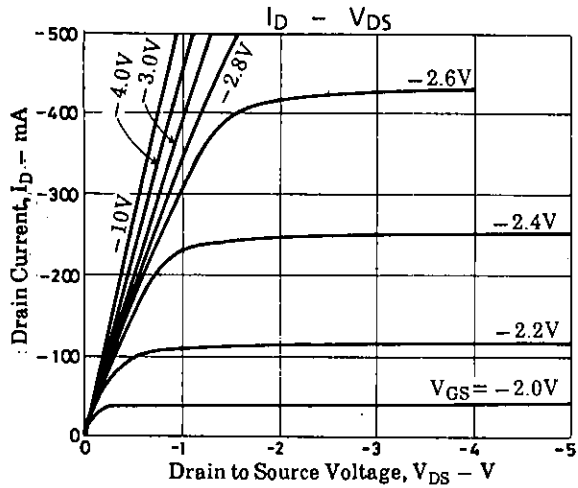
**Switching Time Test Circuit****Package Dimensions 2087**  
(unit: mm)

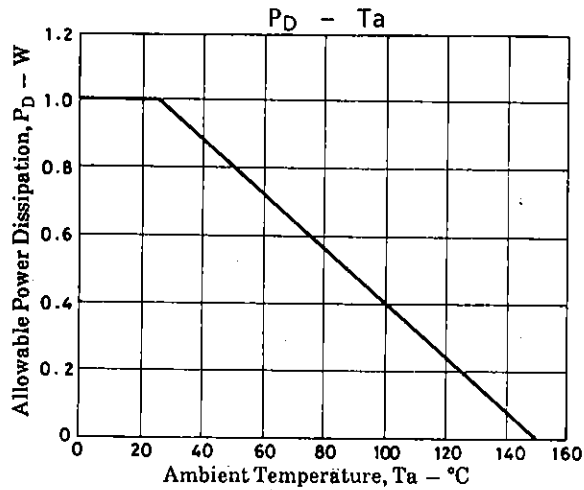
S: Source  
D: Drain  
G: Gate

SANYO: NMP

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