

Features

- Low ON resistance.
- Very high-speed switching.
- Low-voltage drive.

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

Parameter	Symbol	Value	Unit
Drain-to-Source Voltage	V_{DSS}	20	V
Gate-to-Source Voltage	V_{GSS}	± 15	V
Drain Current (DC)	I_D	500	mA
Drain Current (Pulse)	I_{DP}	2	A
Allowable Power Dissipation	P_D	250	mW
Channel Temperature	T_{ch}	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

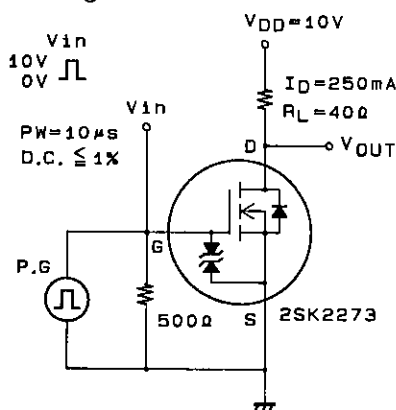
Note: $PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$

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

Parameter	Symbol	Test Conditions	min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1\text{mA}, V_{GS} = 0$	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}	$V_{GS} = \pm 12\text{V}, V_{DS} = 0$			± 10	μA
Gate-to-Source Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10\text{V}, I_D = 1\text{mA}$	1.0		2.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10\text{V}, I_D = 250\text{mA}$	350	700		mS
Static Drain-to-Source ON-State Resistance	$R_{DS(on)}$	$I_D = 250\text{mA}, V_{GS} = 10\text{V}$		350	480	m Ω
ON-State Resistance	$R_{DS(on)}$	$I_D = 250\text{mA}, V_{GS} = 4\text{V}$		550	750	m Ω
Input Capacitance	C_{iss}	$V_{DS} = 10\text{V}, f = 1\text{MHz}$		50		pF
Output Capacitance	C_{oss}	$V_{DS} = 10\text{V}, f = 1\text{MHz}$		45		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 10\text{V}, f = 1\text{MHz}$		15		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		8		ns
Rise Time	t_r	"		10		ns
Turn-OFF Delay Time	$t_{d(off)}$	"		35		ns
Fall Time	t_f	"		20		ns
Diode Forward Voltage	V_{SD}	$I_S = 500\text{mA}, V_{GS} = 0$		0.9		V

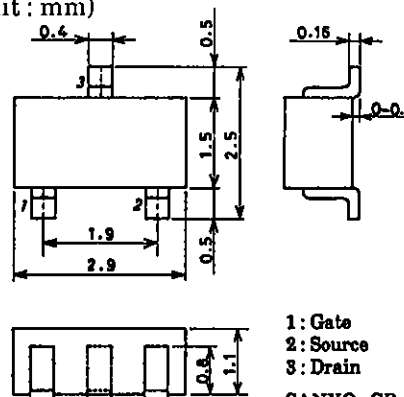
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Switching Time Test Circuit



Package Dimensions 2091A

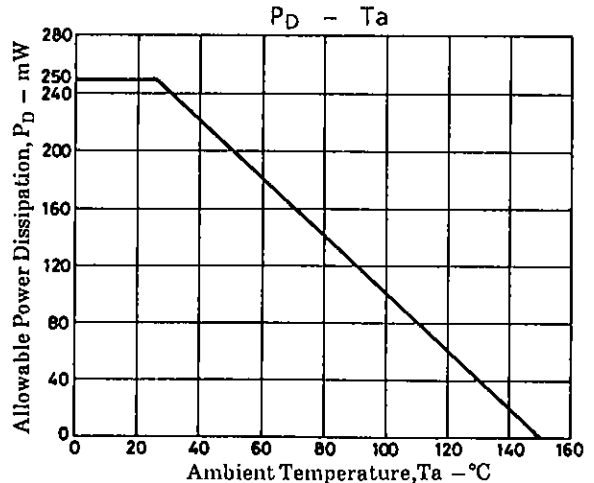
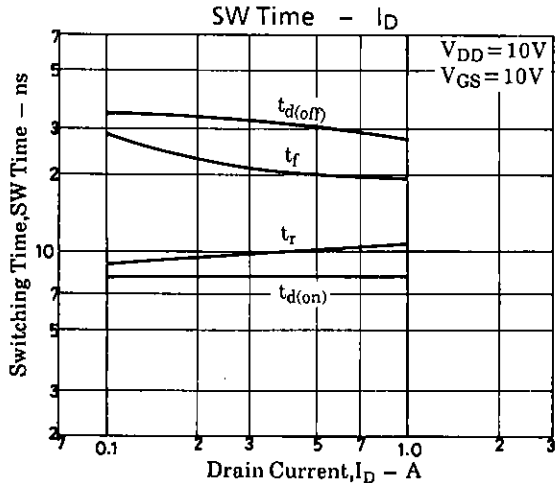
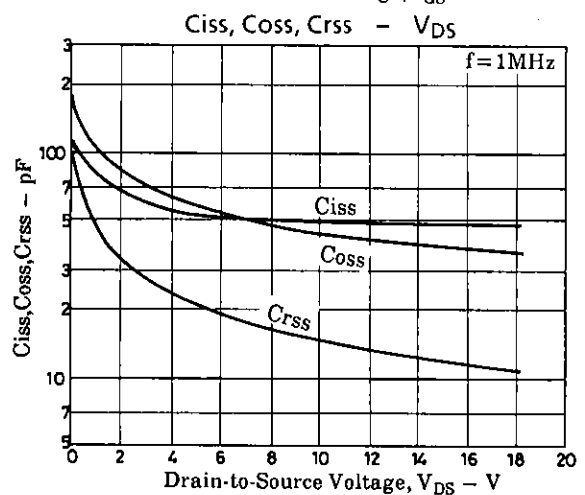
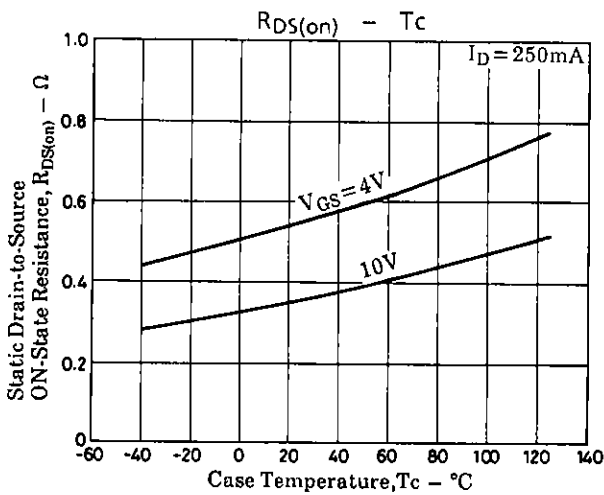
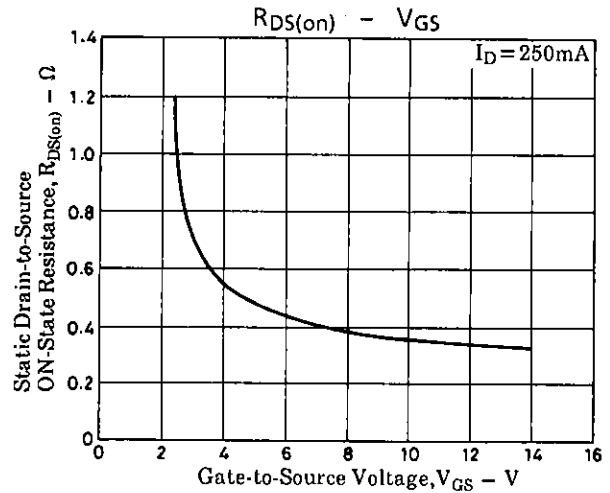
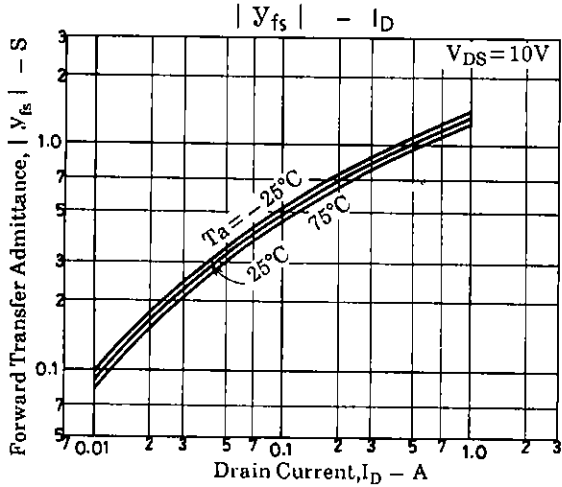
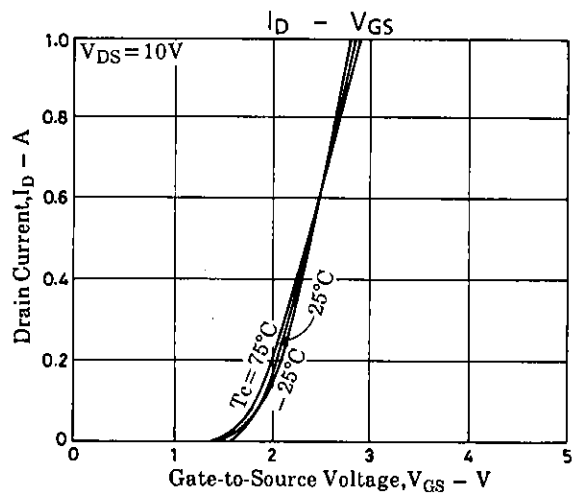
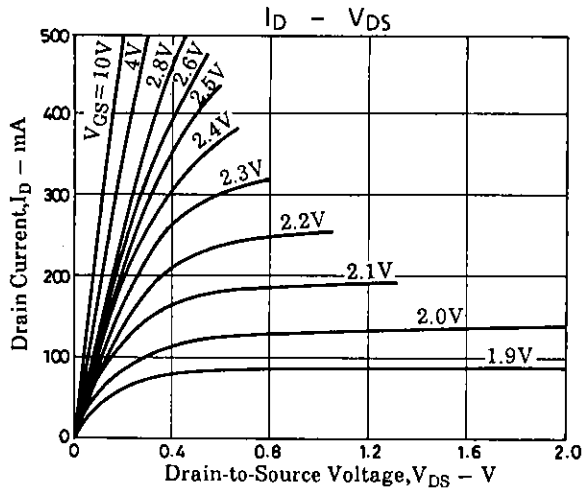
(unit: mm)



1: Gate
2: Source
3: Drain
SANYO: CP

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