

No.3769A

N-Channel MOS Silicon FET

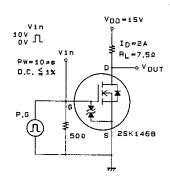
Very High-Speed Switching Applications

Features

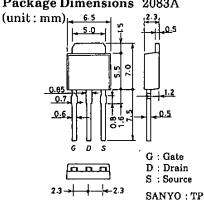
- · Low ON resistance.
- · Very high-speed switching.
- · Low-voltage drive.

Absolute Maximum Ratings at Ta = 25°C				unit		
Drain to Source Voltage	$V_{ m DSS}$			30	V	
Gate to Source Voltage	V_{GSS}			±15	V	
Drain Current(DC)	$I_{\mathbf{D}}$			4	Α	
Drain Current(Pulse)	I_{DP}	$PW \le 10 \mu s$, duty cycle $\le 1\%$		16	Α	
Allowable Power Dissipation	$P_{\mathbf{D}}$			1.0	W	
		$Tc = 25^{\circ}C$		20	W	
Channel Temperature	Tch		150		$^{\circ}\mathrm{C}$	
Storage Temperature	Tstg		-55 to +150		$^{\circ}\mathrm{C}$	
	_					
Electrical Characteristics at Ta=	25°C		min	$_{ m typ}$	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1 \text{ mA}, V_{GS} = 0$	30			V
G-S Breakdown Voltage		$I_G = \pm 100 \mu A, V_{DS} = 0$	± 15			V
Zero Gate Voltage	I_{DSS}	$V_{DS} = 30V, V_{GS} = 0$			100	μ A
Drain Current						•
Gate to Source Leakage Current	I_{GSS}	$V_{GS} = \pm 12V, V_{DS} = 0$			± 10	μ A
Cutoff Voltage	V _{GS(off)}	$V_{DS} = 10V, I_D = 1mA$	1.0		2.0	v
Forward Transfer Admittance	$ \mathbf{y}_{fs} $	$V_{DS} = 10V, I_D = 2A$	2.5	4		S
Static Drain to Source	R _{DS(on)}	$I_D = 2A, V_{GS} = 10V$		0.085	0.12	Ω
on State Resistance	R _{DS(on)}	$I_D = 2A, V_{GS} = 4V$		0.12	0.17	Ω
Input Capacitance	Ciss	$V_{DS} = 10V, f = 1MHz$		400		pF
Output Capacitance	Coss	$V_{DS} = 10V, f = 1MHz$		250		рF
Reverse Transfer Capacitance	Crss	$V_{DS} = 10V, f = 1MHz$		90		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		10		ns
Rise Time	tr	<i>"</i>		20		ns
Turn-OFF Delay Time	$t_{d(off)}$	"		90		ns
Fall Time	t_f	"		60		ns
Diode Forward Voltage	$\dot{ m V}_{ m SD}$	$I_S = 4A, V_{GS} = 0$		1.0	1.5	V
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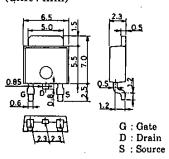
Switching Time Test Circuit



Package Dimensions 2083A

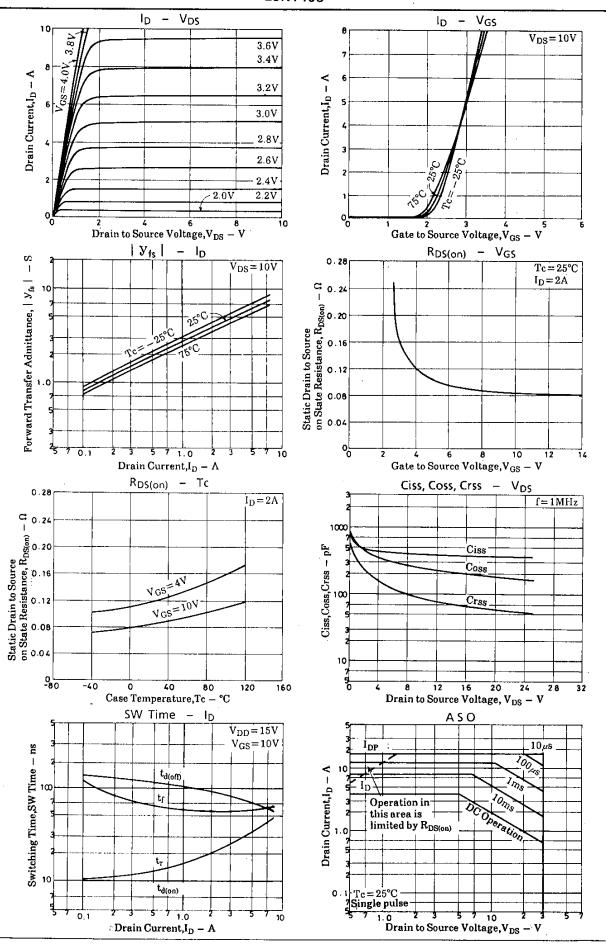


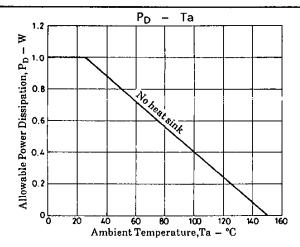
Package Dimensions 2092A (unit: mm)

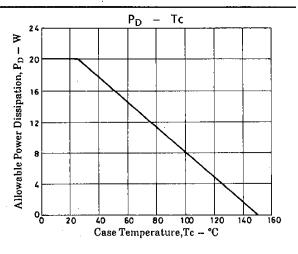


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