



No 4602A

2SK2108

## N-Channel MOS Silicon FET

## Very High-Speed Switching Applications

### Features

- Low ON resistance.
  - Very high-speed switching.
  - Low-voltage drive.
  - Micaless package facilitating mounting.

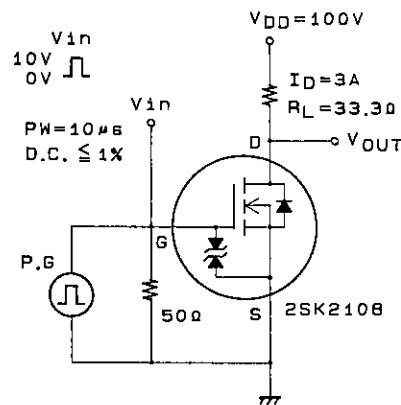
#### Absolute Maximum Ratings at $T_A = 25^\circ\text{C}$

Absolute Maximum Ratings at $T_A = 25^\circ C$		unit
Drain-to-Source Voltage	$V_{DSS}$	250 V
Gate-to-Source Voltage	$V_{GSS}$	$\pm 30$ V
Drain Current(DC)	$I_D$	6 A
Drain Current(Pulse)	$I_{DP}$	PW $\leq 10\ \mu s$ , duty cycle $\leq 1\%$ 24 A
Allowable Power Dissipation	$P_D$	2.0 W
		25 W
Channel Temperature	$T_{ch}$	150 $^\circ C$
Storage Temperature	$T_{stg}$	-55 to +150 $^\circ C$

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

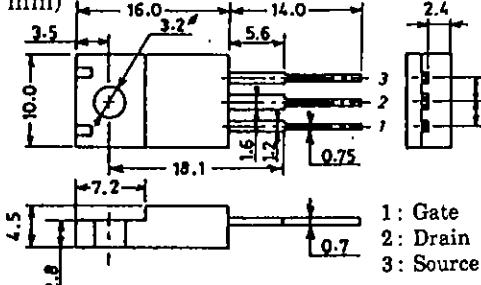
Electrical Characteristics at $T_A = 25^\circ C$			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1\text{mA}, V_{GS} = 0$	250			V
G-S Breakdown Voltage	$V_{(BR)GSS}$	$I_G = \pm 100\mu\text{A}, V_{DS} = 0$	$\pm 30$			V
Zero-Gate Voltage	$I_{DSS}$	$V_{DS} = 250\text{V}, V_{GS} = 0$		100		$\mu\text{A}$
Drain Current						
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS} = \pm 25\text{V}, V_{DS} = 0$			$\pm 10$	$\mu\text{A}$
Cutoff Voltage	$V_{GS(\text{off})}$	$V_{DS} = 10\text{V}, I_D = 1\text{mA}$	1.5		2.5	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10\text{V}, I_D = 3\text{A}$	3	5		S
Static Drain-to-Source	$R_{DS(\text{on})}$	$I_D = 3\text{A}, V_{GS} = 10\text{V}$	380	500		$\text{m}\Omega$
ON-State Resistance						
Input Capacitance	$C_{iss}$	$V_{DS} = 20\text{V}, f = 1\text{MHz}$	750			pF
Output Capacitance	$C_{oss}$	$V_{DS} = 20\text{V}, f = 1\text{MHz}$	130			pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = 20\text{V}, f = 1\text{MHz}$	50			pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.	14			ns
Rise Time	$t_r$	"	19			ns
Turn-OFF Delay Time	$t_{d(off)}$	"	80			ns
Fall Time	$t_f$	"	70			ns
Diode Forward Voltage	$V_{SD}$	$I_S = 6\text{A}, V_{GS} = 0$	1.0	1.5		V

## Switching Time Test Circuit



#### **Package Dimensions 2063A**

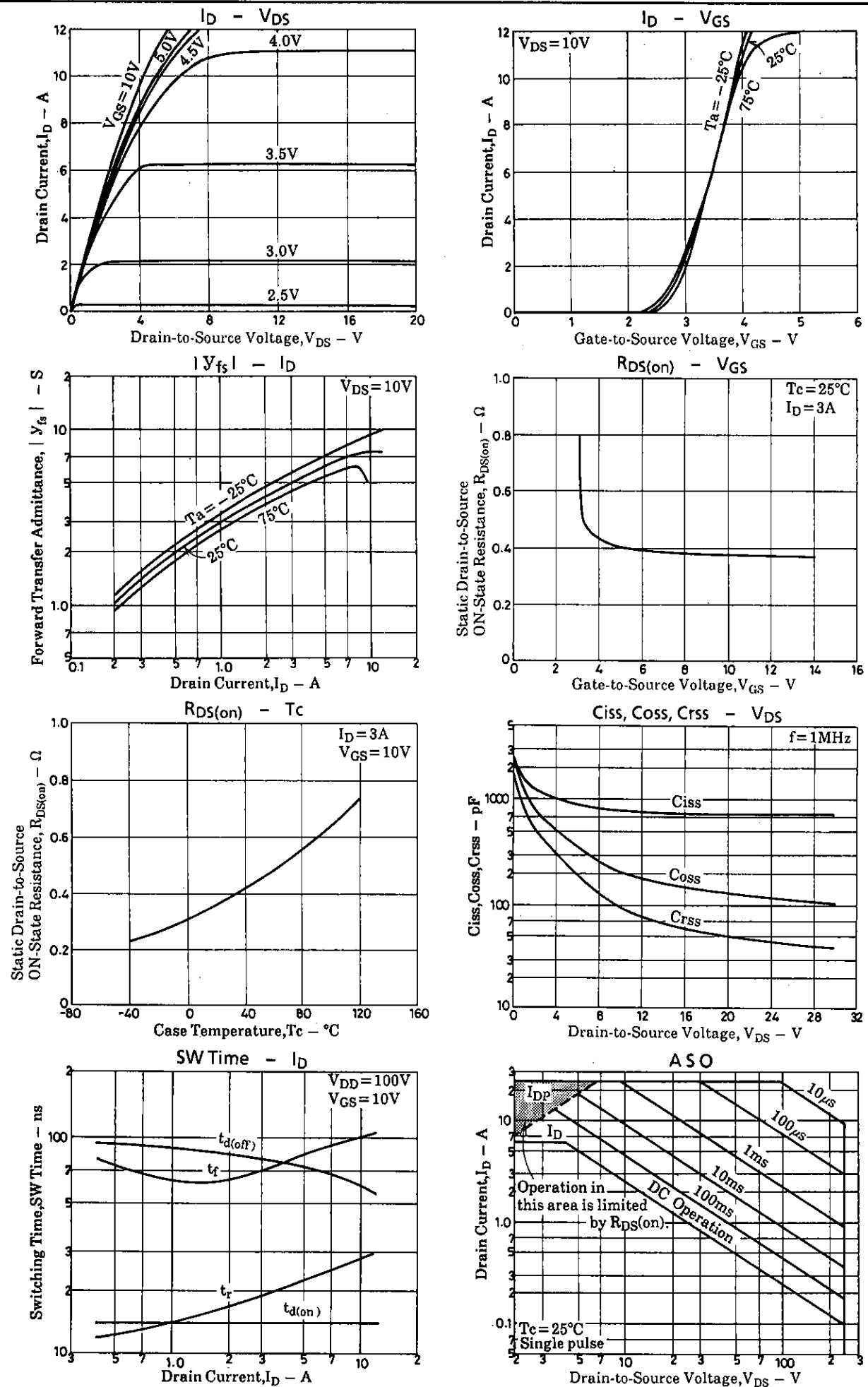
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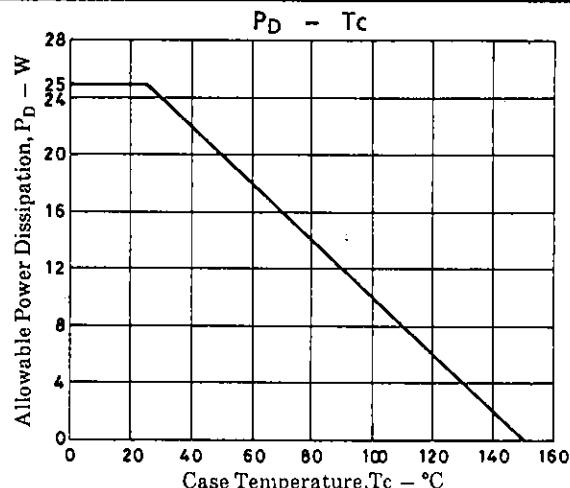
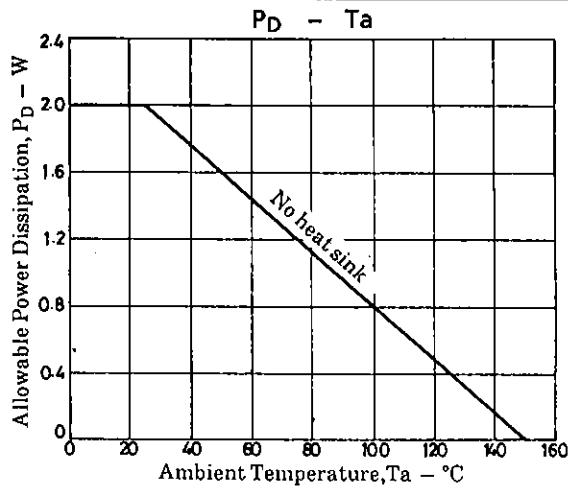


- 1 : Gate
- 2 : Drain
- 3 : Source

SANYO : TO-220ML

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