



No.4601A

2SK2161

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.

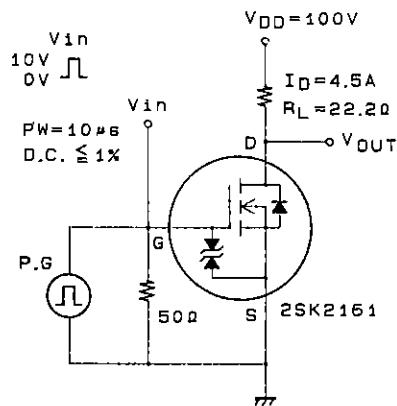
Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Absolute Maximum Ratings at $T_A = 25^\circ\text{C}$		Unit
Drain-to-Source Voltage	V_{DSS}	200 V
Gate-to-Source Voltage	V_{GSS}	± 20 V
Drain Current(DC)	I_D	9 A
Drain Current(Pulse)	I_{DP}	PW $\leq 10\ \mu\text{s}$, duty cycle $\leq 1\%$ 36 A
Allowable Power Dissipation	P_D	2.0 W
		25 W
Channel Temperature	T_{ch}	150 $^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150 $^\circ\text{C}$

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

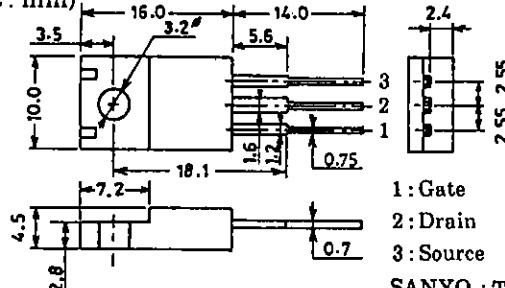
Electrical Characteristics at $T_A = 25^\circ C$			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1\text{mA}, V_{GS} = 0$	200			V
G-S Breakdown Voltage	$V_{(BR)GSS}$	$I_G = \pm 100\mu\text{A}, V_{DS} = 0$		± 20		V
Zero-Gate Voltage	I_{DSS}	$V_{DS} = 200\text{V}, V_{GS} = 0$			100	μA
Drain Current						
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 16\text{V}, V_{DS} = 0$			± 10	μA
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} $	$V_{DS} = 10\text{V}, I_D = 4.5\text{A}$	3.5	6		S
Static Drain-to-Source	$R_{DS(\text{on})}$	$I_D = 4.5\text{A}, V_{GS} = 10\text{V}$	250	350		$\text{m}\Omega$
ON-State Resistance						
Input Capacitance	C_{iss}	$V_{DS} = 20\text{V}, f = 1\text{MHz}$	700			pF
Output Capacitance	C_{oss}	$V_{DS} = 20\text{V}, f = 1\text{MHz}$	140			pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 20\text{V}, f = 1\text{MHz}$	55			pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.	14			ns
Rise Time	t_r	"	19			ns
Turn-OFF Delay Time	$t_{d(off)}$	"	200			ns
Fall Time	t_f	"	80			ns
Diode Forward Voltage	V_{SD}	$I_S = 9\text{A}, V_{GS} = 0$	1.0	1.5		V

Switching Time Test Circuit



Package Dimensions 2063A

(unit: mm)



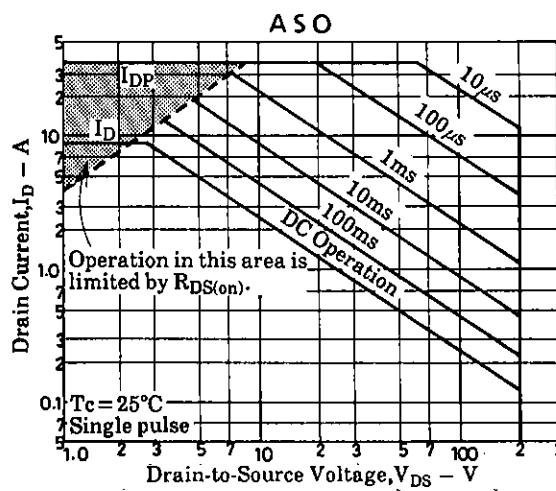
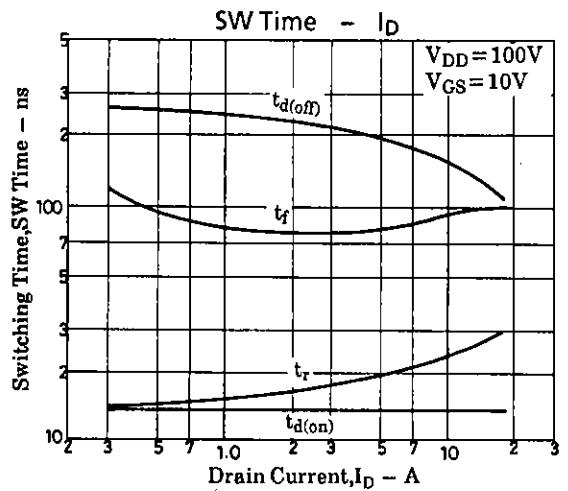
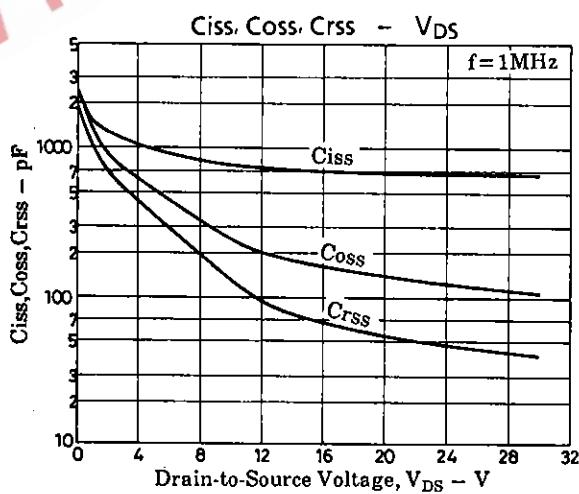
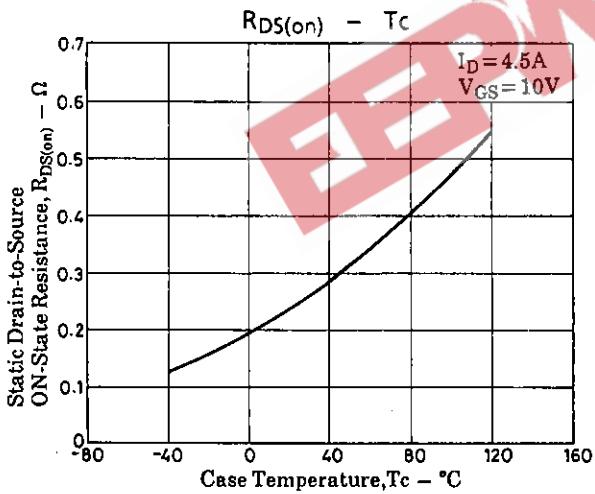
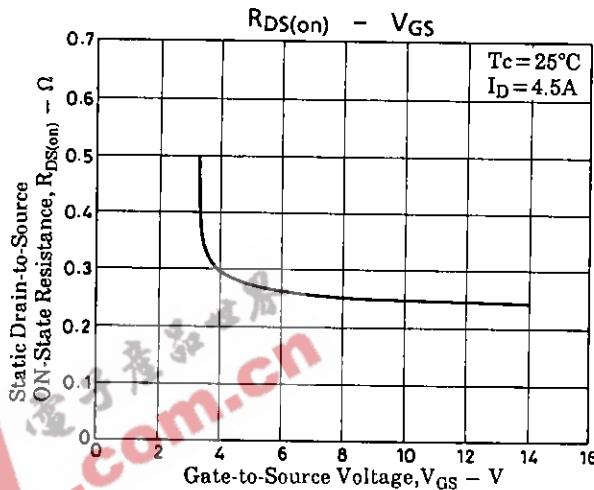
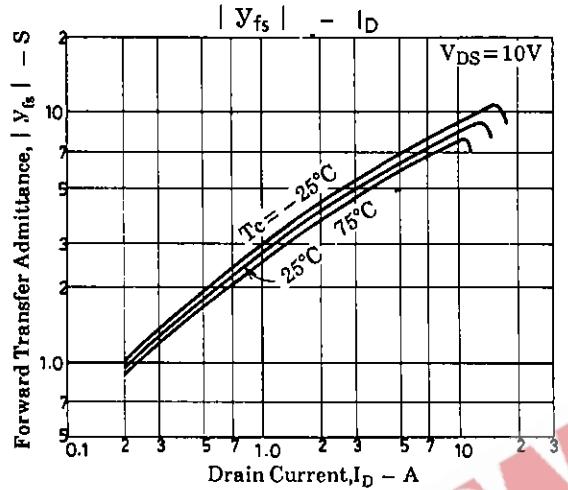
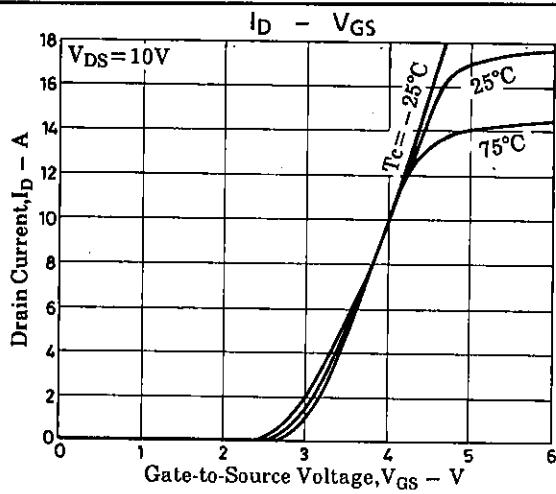
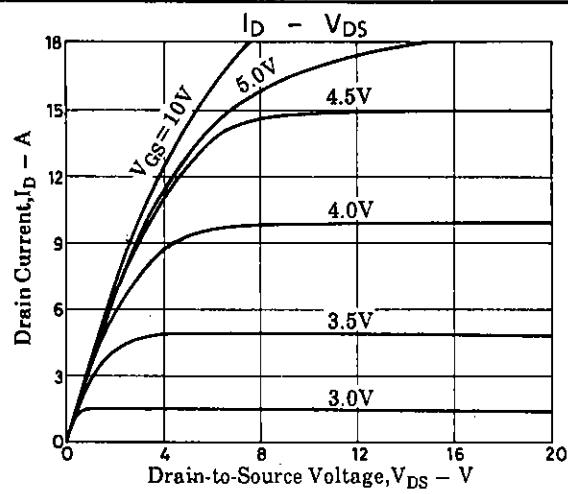
1-Gate

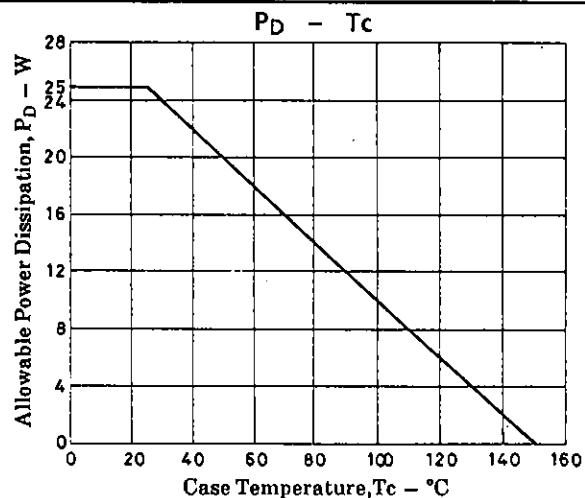
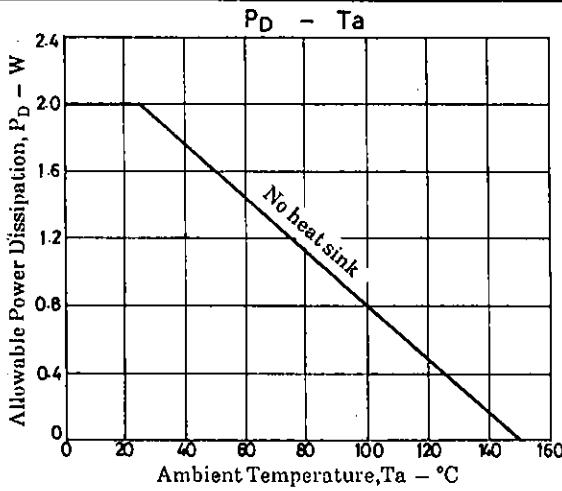
1. Gato
2. Dusin

2. Draw
3. Solve

3. Source

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