

# 2SK0601 (2SK601)

## Silicon N-channel MOSFET

For switching circuits

### ■ Features

- Low drain-source ON resistance  $R_{DS(on)}$
- High-speed switching
- Allowing to be driven directly by CMOS and TTL
- Mini-power type package, allowing downsizing of the sets and automatic insertion through the tape/magazine packing.

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

Parameter	Symbol	Rating	Unit
Drain-source voltage	$V_{DS}$	80	V
Gate-source voltage (Drain open)	$V_{GSO}$	20	V
Drain current	$I_D$	0.5	A
Peak drain current	$I_{DP}$	1.0	A
Power dissipation *	$P_D$	1	W
Channel temperature	$T_{ch}$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

Note) \*: PC board: Copper foil of the drain portion should have a area of 1 cm<sup>2</sup> or more and the board thickness should be 1.7 mm.

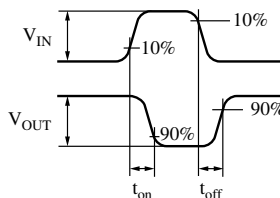
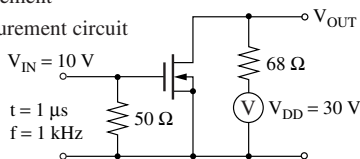
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain-source surrender voltage	$V_{DSS}$	$I_{DS} = 100 \mu\text{A}, V_{GS} = 0$	80			V
Drain-source cutoff current	$I_{DSS}$	$V_{DS} = 60 \text{ V}, V_{GS} = 0$			10	$\mu\text{A}$
Gate-source cutoff current	$I_{GSS}$	$V_{GS} = 20 \text{ V}, V_{DS} = 0$			0.1	$\mu\text{A}$
Gate threshold voltage	$V_{th}$	$I_D = 1 \text{ mA}, V_{DS} = V_{GS}$	1.5		3.5	V
Drain-source ON resistance *1	$R_{DS(on)}$	$I_D = 0.5 \text{ A}, V_{GS} = 10 \text{ V}$		2	4	$\Omega$
Forward transfer admittance	$ Y_{fs} $	$I_D = 0.2 \text{ A}, V_{DS} = 15 \text{ V}, f = 1 \text{ kHz}$		300		mS
Short-circuit forward transfer capacitance (Common source)	$C_{iss}$	$V_{DS} = 10 \text{ V}, V_{GS} = 0, f = 1 \text{ MHz}$		45		pF
Short-circuit output capacitance (Common source)	$C_{oss}$			30		pF
Reverse transfer capacitance (Common source)	$C_{rss}$			8		pF
Turn-on time *2	$t_{on}$			15		ns
Turn-off time *2	$t_{off}$			20		ns

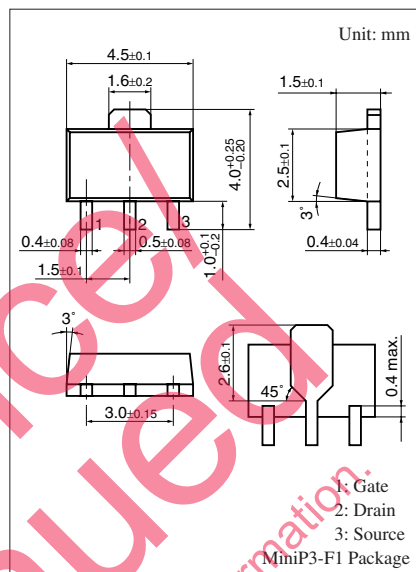
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. \*1: Pulse measurement

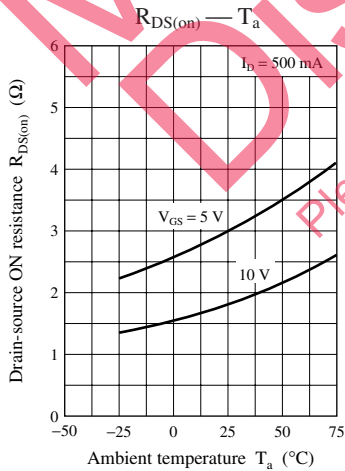
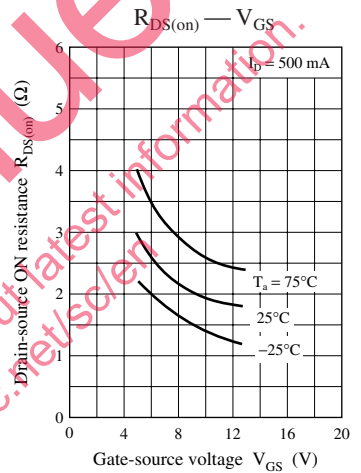
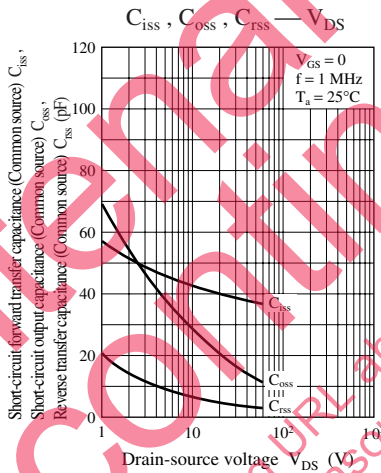
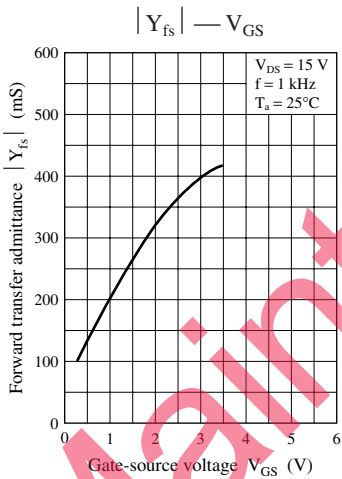
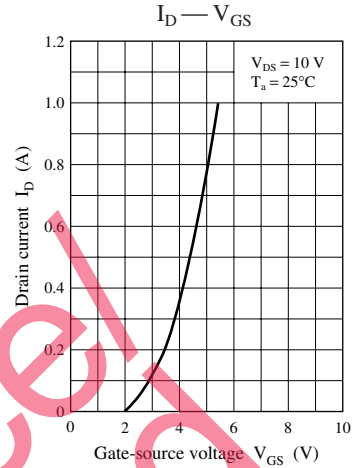
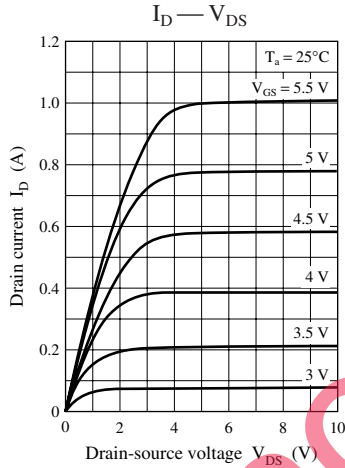
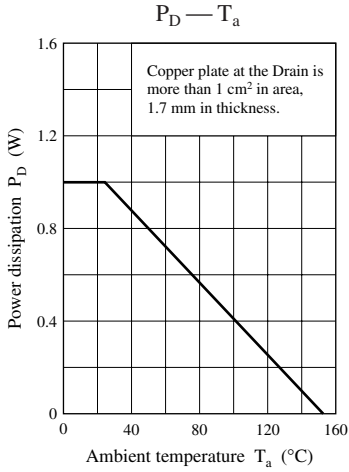
\*2:  $t_{on}$ ,  $t_{off}$  measurement circuit



Note) The part number in the parenthesis shows conventional part number.



Marking Symbol: ○



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