

2SK0601 (2SK601)

Silicon N-channel MOSFET

For switching

■ Features

- Low 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 to source voltage	V_{DS}	80	V
Gate to source voltage	V_{GSO}	20	V
Drain current	I_D	± 0.5	A
Max drain current	I_{DP}	± 1	A
Allowable power dissipation *	P_D	1	W
Channel temperature	T_{ch}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

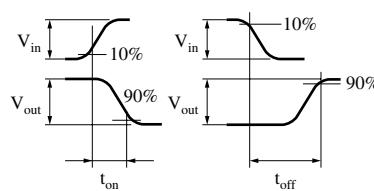
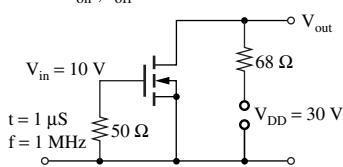
Note) *: PC board: Copper foil of the drain portion should have a area of 1 cm² or more and the board thickness should be 1.7 mm.

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

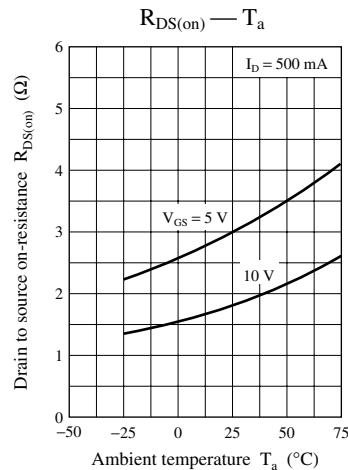
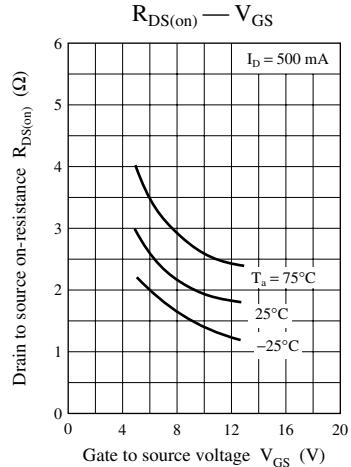
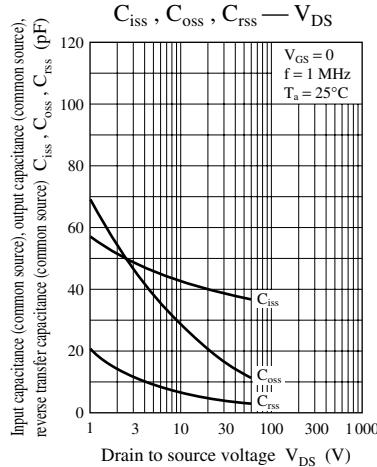
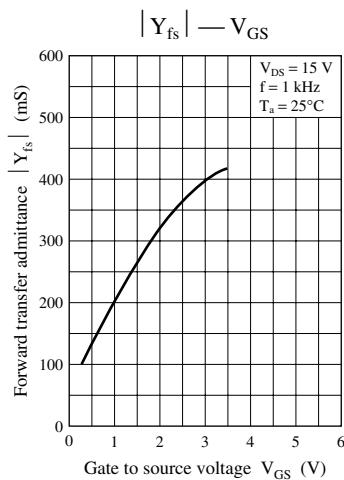
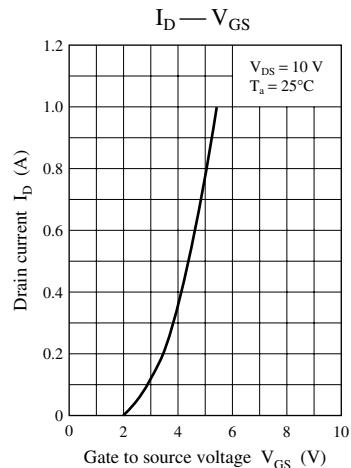
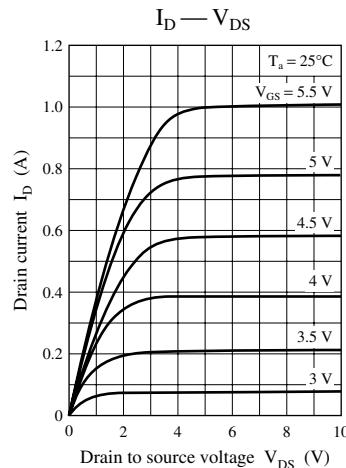
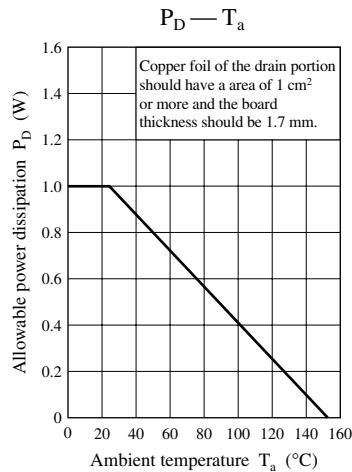
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain to source cut-off current	I_{DSS}	$V_{DS} = 60\text{ V}$, $V_{GS} = 0$			10	μA
Gate to source leakage current	I_{GSS}	$V_{GS} = 20\text{ V}$, $V_{DS} = 0$			0.1	μA
Drain to source breakdown voltage	V_{DSS}	$I_{DS} = 100\text{ }\mu\text{A}$, $V_{GS} = 0$	80			V
Gate threshold voltage	V_{th}	$I_D = 1\text{ mA}$, $V_{DS} = V_{GS}$	1.5		3.5	V
Drain to source on-resistance ¹	$R_{DS(on)}$	$I_D = 0.5\text{ A}$, $V_{GS} = 10\text{ V}$		2	4	Ω
Forward transfer admittance	$ Y_{fs} $	$I_D = 0.2\text{ A}$, $V_{DS} = 15\text{ V}$, $f = 1\text{ kHz}$	300			mS
Input capacitance (common source)	C_{iss}	$V_{DS} = 10\text{ V}$, $V_{GS} = 0$, $f = 1\text{ MHz}$	45			pF
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: Pulse measurement

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



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



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