2SK0601G

Silicon N-channel MOSFET

For switching circuits

■ Features

- Low drain-souce 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.

■ Package

- Code
  MiniP3-F2
- Pin Name
  1: Gate
  2: Drain
  3: Source

■ Marking Symbol: O

■ Absolute Maximum Ratings $T_a = 25°C$

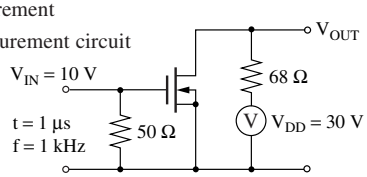
Parameter	Symbol	Rating	Unit
Drain-source voltage	V_{DS}	80	V
Gate-source voltage (Drain open)	V_{GSO}	20	V
Drain current	I_D	0.5	A
Peak drain current	I_{DP}	1.0	A
Power dissipation *	P_D	1	W
Channel temperature	T_{ch}	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

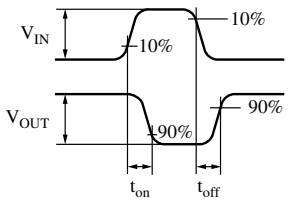
Note) ∗: PC board: Copper foil of the drain portion should have a area of 1 cm^2 or more and the board thickness should be 1.7 mm.

■ Electrical Characteristics $T_a = 25°C \pm 3°C$

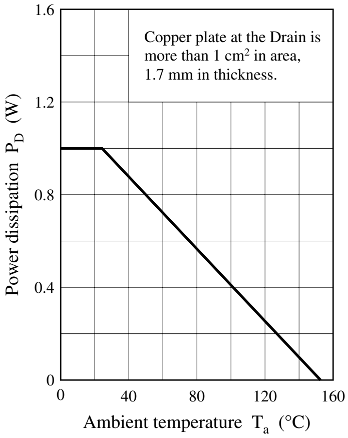
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain-source surrender voltage	V_{DSS}	I_{DS} = 100 µA, V_{GS} = 0	80			V
Drain-source cutoff current	I_{DSS}	V_{DS} = 60 V, V_{GS} = 0			10	µA
Gate-source cutoff current	I_{GSS}	V_{GS} = 20 V, V_{DS} = 0			0.1	µA
Gate threshold voltage	V_{th}	I_D = 1 mA, V_{DS} = V_{GS}	1.5		3.5	V
Drain-source ON resistance *1	$R_{DS(on)}$	I_D = 0.5 A, V_{GS} = 10 V		2	4	Ω
Forward transfer admittance	$\|Y_{fs}\|$	I_D = 0.2 A, V_{DS} = 15 V, f = 1 kHz		300		mS
Short-circuit forward transfer capacitance (Common source)	C_{iss}	V_{DS} = 10 V, V_{GS} = 0, f = 1 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

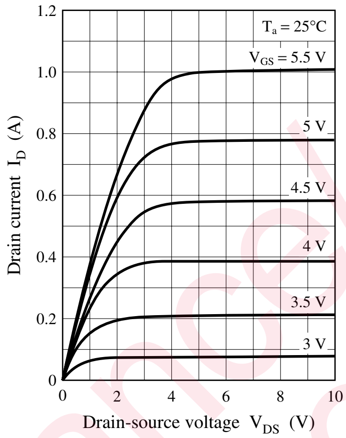




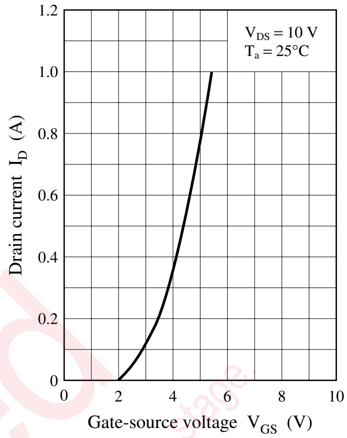
P_D — T_a



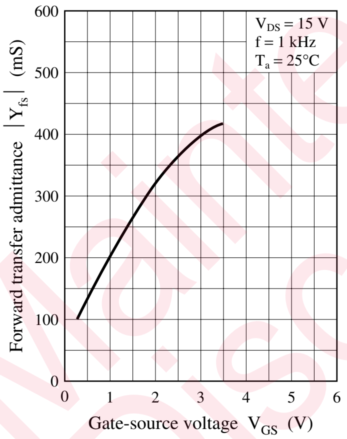
I_D — V_{DS}



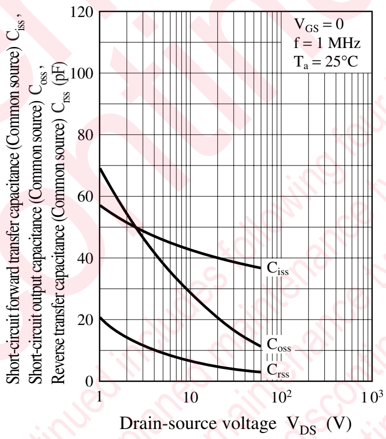
I_D — V_{GS}



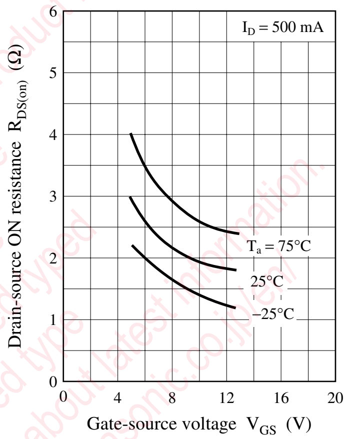
$|Y_{fs}|$ — V_{GS}



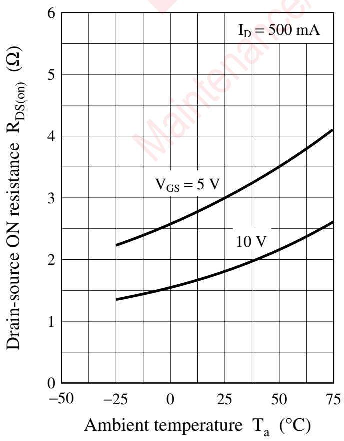
C_{iss} , C_{oss} , C_{rss} — V_{DS}



$R_{DS(on)}$ — V_{GS}

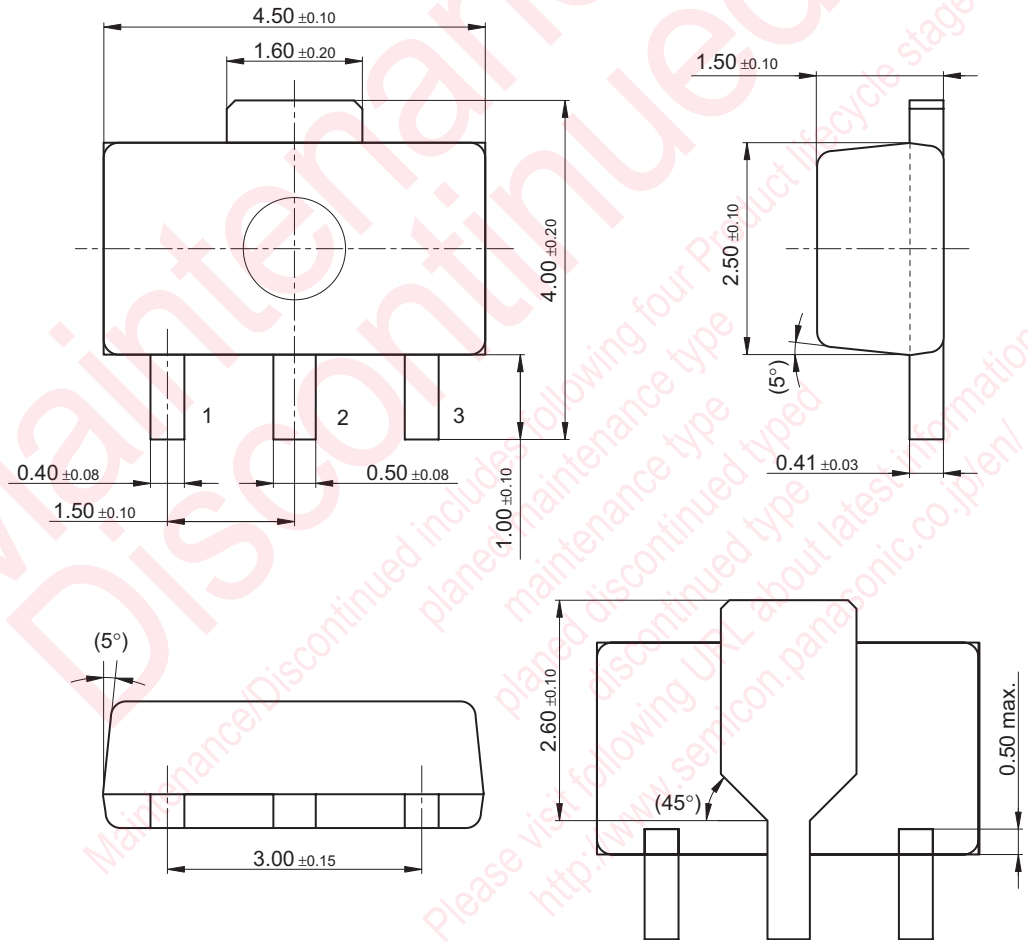


$R_{DS(on)}$ — T_a



MiniP3-F2

Unit: mm



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