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# XN01872 (XN1872)

## Silicon n-channel enhancement MOSFET

For switching

### ■ Features

- Two elements incorporated into one package  
(Source-coupled FETs)
- Reduction of the mounting area and assembly cost by one half

### ■ Basic Part Number

- 2SK0621 (2SK621) × 2

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

Parameter	Symbol	Rating	Unit
Drain-source surrender voltage	$V_{DSS}$	50	V
Gate-source voltage (Drain open)	$V_{GSO}$	8	V
Drain current	$I_D$	100	mA
Peak drain current	$I_{DP}$	200	mA
Total power dissipation	$P_T$	300	mW
Channel temperature	$T_{ch}$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

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

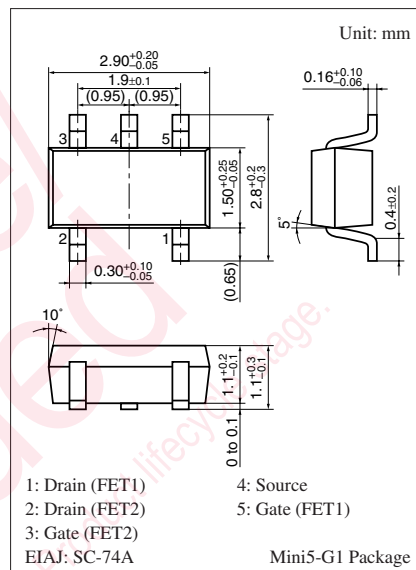
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain-source surrender voltage	$V_{DSS}$	$I_D = 100 \mu\text{A}$ , $V_{GS} = 0$	50			V
Drain-source cutoff current	$I_{DSS}$	$V_{DS} = 10 \text{ V}$ , $V_{GS} = 0$			10	$\mu\text{A}$
Gate-source cutoff current	$I_{GSS}$	$V_{GS} = 8 \text{ V}$ , $V_{DS} = 0$	40		80	$\mu\text{A}$
Gate threshold voltage	$V_{th}$	$I_D = 100 \mu\text{A}$ , $V_{DS} = V_{GS}$	1.5		3.5	V
Drain-source ON resistance	$R_{DS(on)}$	$I_D = 20 \text{ mA}$ , $V_{GS} = 5 \text{ V}$			50	$\Omega$
Forward transfer admittance	$ Y_{fs} $	$I_D = 20 \text{ mA}$ , $V_{DS} = 5 \text{ V}$ , $f = 1 \text{ kHz}$	20	30		mS
Output voltage high-level	$V_{OH}$	$V_{DS} = 5 \text{ V}$ , $V_{GS} = 1 \text{ V}$ , $R_L = 200 \Omega$	4.5			V
Output voltage low-level	$V_{OL}$	$V_{DS} = 5 \text{ V}$ , $V_{GS} = 5 \text{ V}$ , $R_L = 200 \Omega$			1.0	V
Input resistance *1	$R_1+R_2$		100		200	k $\Omega$
Turn-on time *2	$t_{on}$	$V_{DD} = 5 \text{ V}$ , $V_{GS} = 0 \text{ V to } 5 \text{ V}$ , $R_L = 200 \Omega$			1.0	$\mu\text{s}$
Turn-off time *2	$t_{off}$	$V_{DD} = 5 \text{ V}$ , $V_{GS} = 5 \text{ V to } 0 \text{ V}$ , $R_L = 200 \Omega$			1.0	$\mu\text{s}$
Short-circuit forward transfer capacitance (Common-source)	$C_{iss}$	$V_{DS} = 5 \text{ V}$ , $V_{GS} = 0$ , $f = 1 \text{ MHz}$		9	15	pF

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

2. \*1: Resistance ratio  $R_1/R_2 = 1/50$

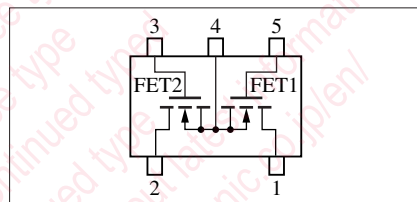
\*2: Pulse measurement

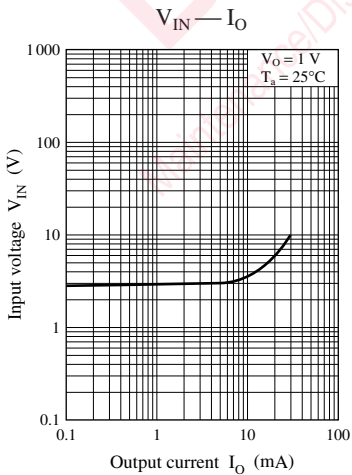
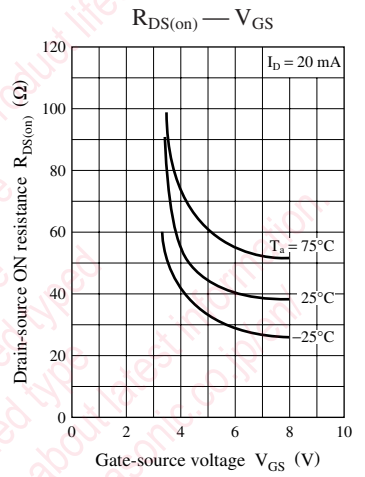
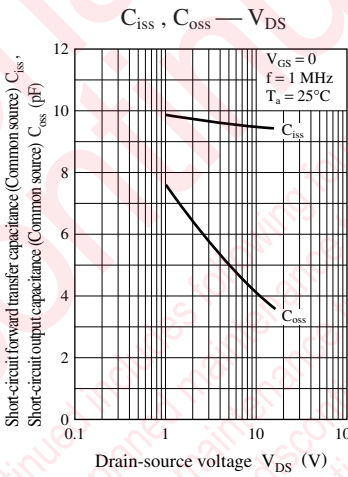
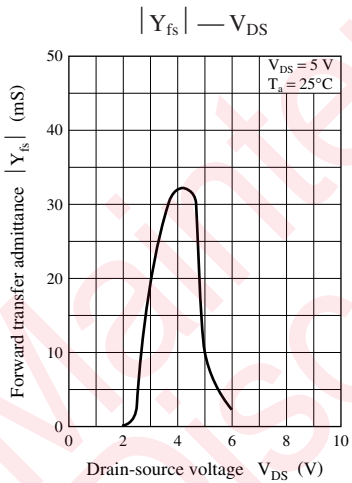
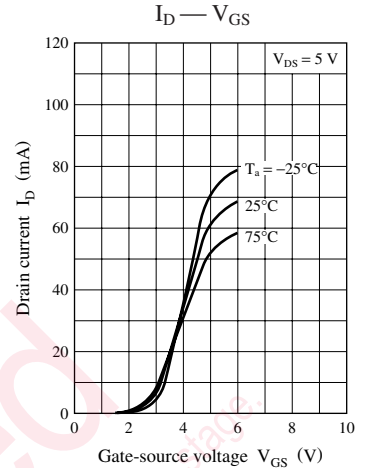
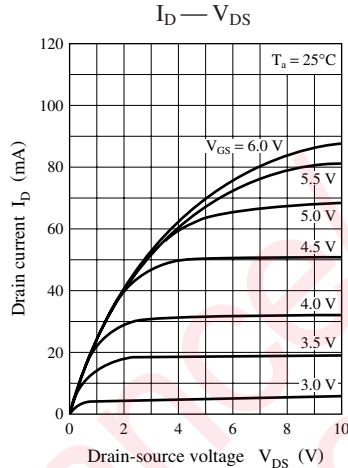
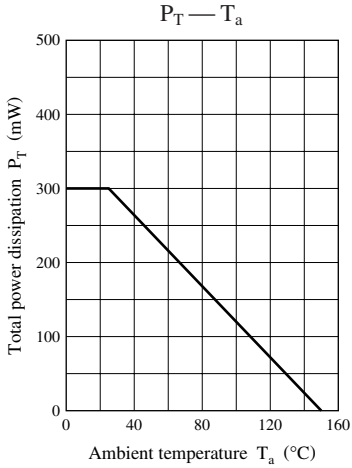
Note) The part number in the parenthesis shows conventional part number.



Marking Symbol: 5U

Internal Connection







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