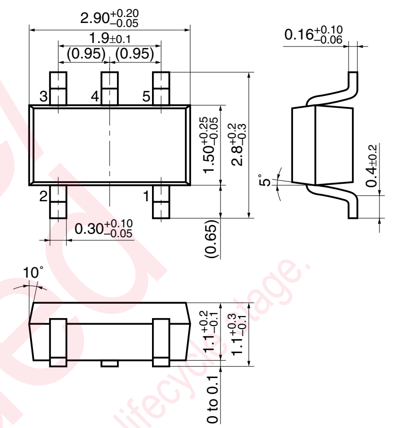
 Panasonic

XN01872 (XN1872)

Silicon n-channel enhancement MOSFET

For switching



1: Drain (FET1)
2: Drain (FET2)
3: Gate (FET2)
4: Source
5: Gate (FET1)
EIAJ: SC-74A
Mini5-G1 Package

■ Features

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

■ Basic Part Number

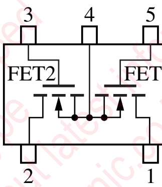
- 2SK0621 (2SK621) × 2

■ Absolute Maximum Ratings $T_a = 25°C$

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

Marking Symbol: 5U

Internal Connection



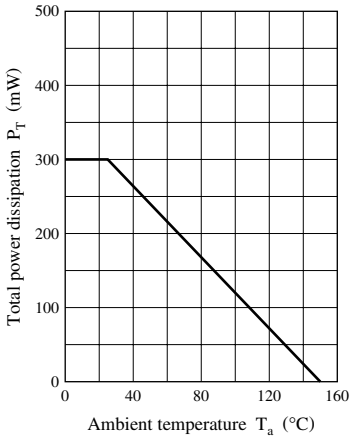
■ Electrical Characteristics $T_a = 25°C \pm 3°C$

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

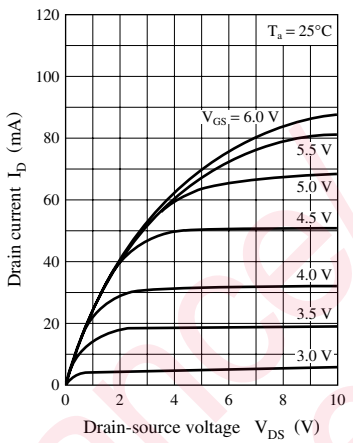
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.
2. *1: Resistance ratio $R_1 / R_2 = 1/50$
*2: Pulse measurement

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

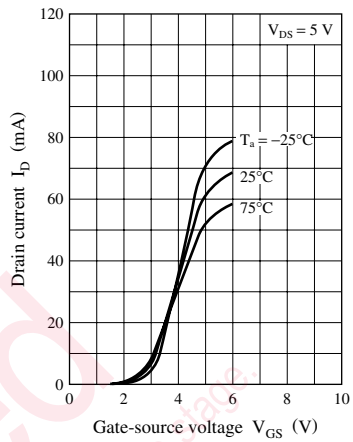
P_T — T_a



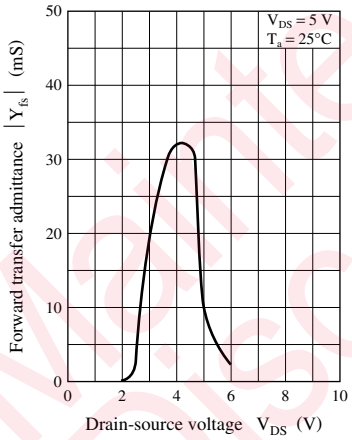
I_D — V_{DS}



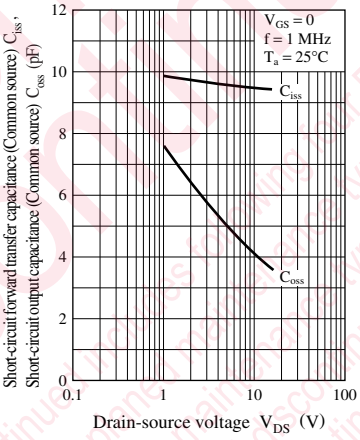
I_D — V_{GS}



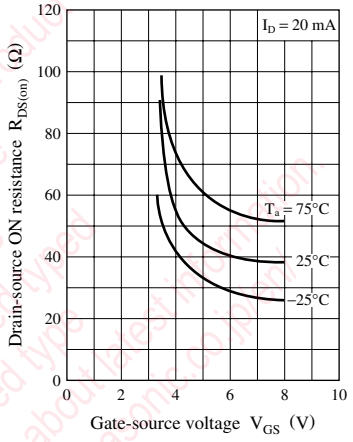
$|Y_{fs}|$ — V_{DS}



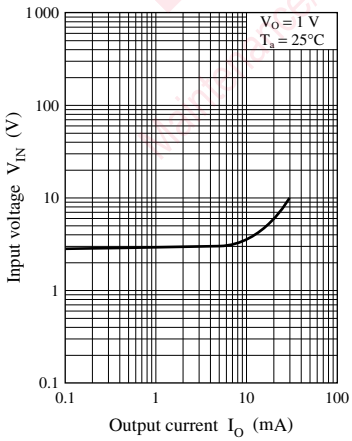
C_{iss} , C_{oss} — V_{DS}



$R_{DS(on)}$ — V_{GS}



V_{IN} — I_O



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