

XN1872

Silicon N-channel • Enhancement MOS FET

For switching

Features

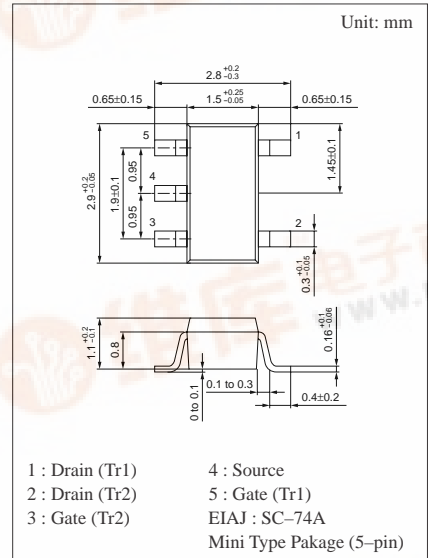
- Two elements incorporated into one package.
(Source-coupled FETs)
- Reduction of the mounting area and assembly cost by one half.

Basic Part Number of Element

- 2SK621 × 2 elements

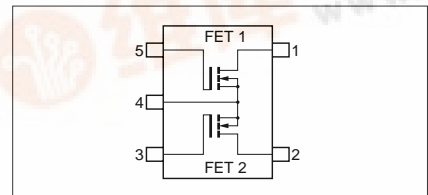
Absolute Maximum Ratings (Ta=25°C)

	Parameter	Symbol	Ratings	Unit
Rating of element	Drain to source voltage	V _{DSS}	50	V
	Gate to source voltage	V _{GSO}	8	V
	Drain current	I _D	100	mA
I _{DM}		200	mA	
Overall	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 (Ta=25°C)

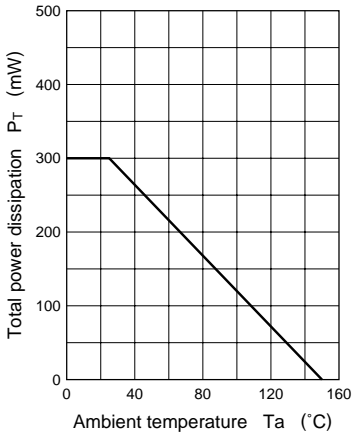
Parameter	Symbol	Conditions	min	typ	max	Unit
Drain to source voltage	V _{DSS}	I _D = 100μA, V _{GS} = 0	50			V
Drain current	I _{DSS}	V _{DS} = 10V, V _{GS} = 0			10	μA
Gate cutoff current	I _{GSS}	V _{GS} = 8V, V _{DS} = 0	40		80	μA
Gate threshold voltage	V _{th}	I _D = 100μA, V _{DS} = V _{GS}	1.5		3.5	V
Drain resistance	R _{DS(on)}	I _D = 20mA, V _{GS} = 5V			50	Ω
Forward transfer admittance	Y _{fs}	I _D = 20mA, V _{DS} = 5V, f = 1kHz	20	30		mS
Output voltage high level	V _{OH}	V _{DS} = 5V, V _{GS} = 1V, R _L = 200Ω	4.5			V
Output voltage low level	V _{OL}	V _{DS} = 5V, V _{GS} = 5V, R _L = 200Ω			1.0	V
Input resistance	R ₁ +R ₂ ^{*1}		100		200	kΩ
Turn-on time	t _{on} ^{*2}	V _{DD} = 5V, V _{GS} = 0 to 5V, R _L = 200Ω			1.0	μs
Turn-off time	t _{off} ^{*2}	V _{DD} = 5V, V _{GS} = 5 to 0V, R _L = 200Ω			1.0	μs
Common source short-circuit input capacitance	C _{iss}	V _{DS} = 5V, V _{GS} = 0, f = 1MHz		9	15	pF

*1 Pulse measurement

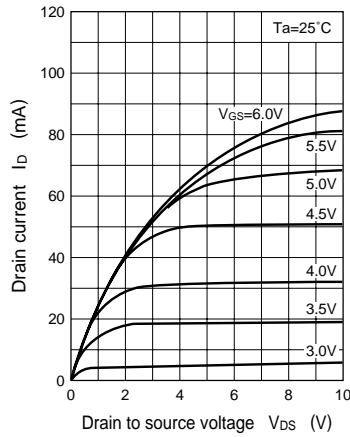
*2 Resistance ratio R₁/R₂ = 1/50



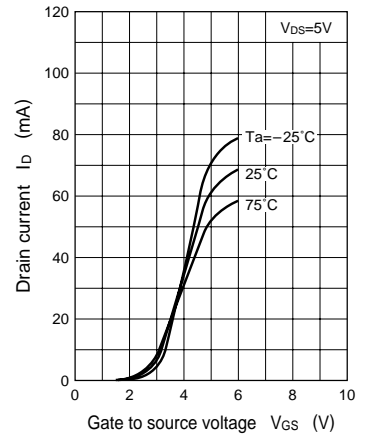
$P_T - T_a$



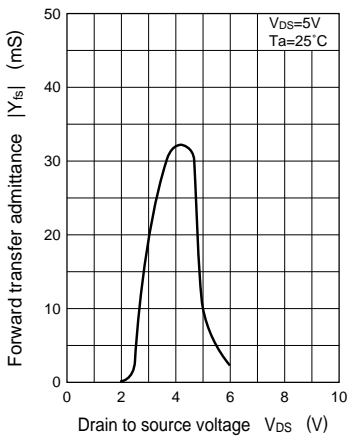
$I_D - V_{DS}$



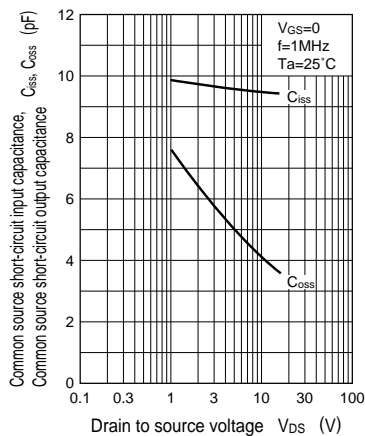
$I_D - V_{GS}$



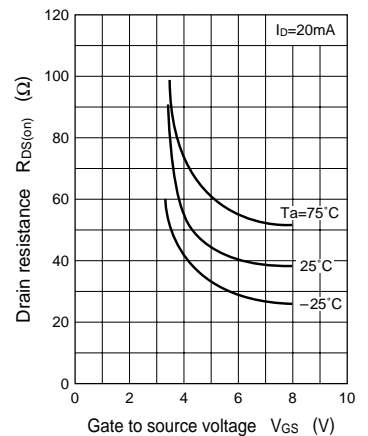
$|Y_{fs}| - V_{DS}$



$C_{iss}, C_{oss} - V_{DS}$



$R_{DS(ON)} - V_{GS}$



$V_{IN} - I_O$

