

UP01878

Silicon N-channel MOSFET

For switching

■ Features

- Two elements incorporated into one package
- Reduction of the mounting area and assembly cost by one half

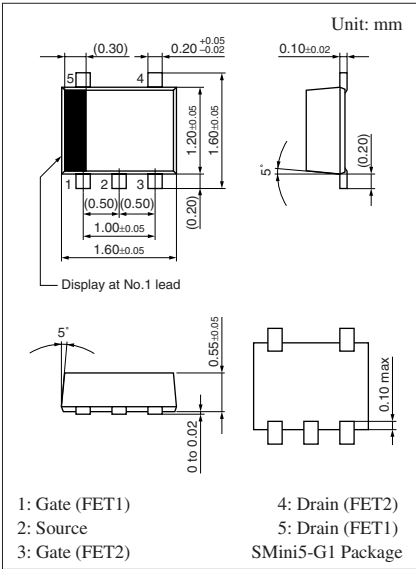
■ Basic Part Number of Element

- 2SK3539 × 2 elements

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

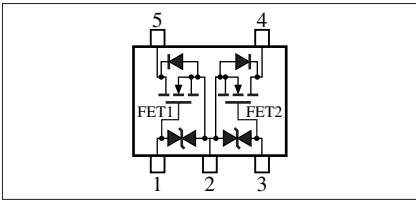
	Parameter	Symbol	Rating	Unit
Rating of element	Drain to source voltage	V_{DSS}	50	V
	Gate to source voltage	V_{GSO}	± 7	V
	Drain current	I_D	100	mA
	Max drain current	I_{DP}	200	mA
Overall	Allowable power dissipation *	P_D	125	mW
	Channel temperature	T_{ch}	125	$^\circ\text{C}$
	Storage temperature	T_{stg}	-55 to $+125$	$^\circ\text{C}$

Note) *: Total power dissipation



Marking Symbol: AL

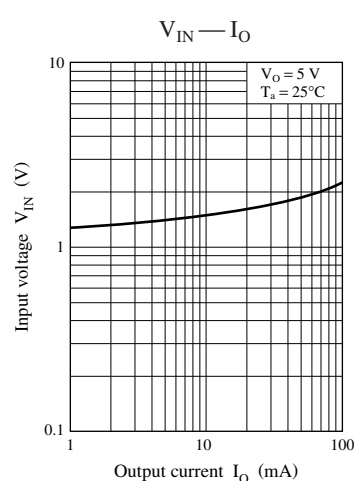
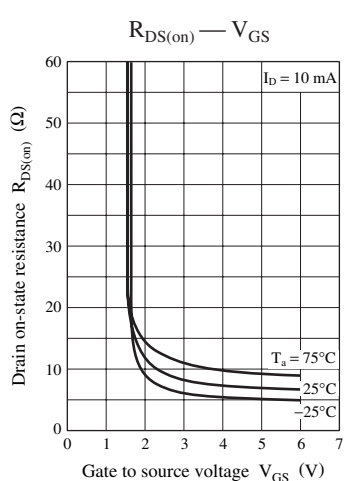
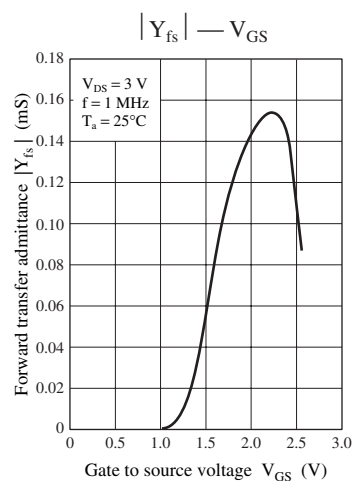
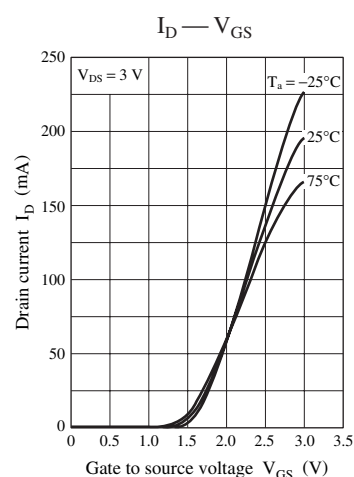
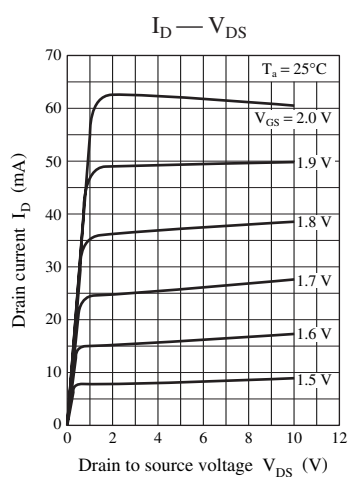
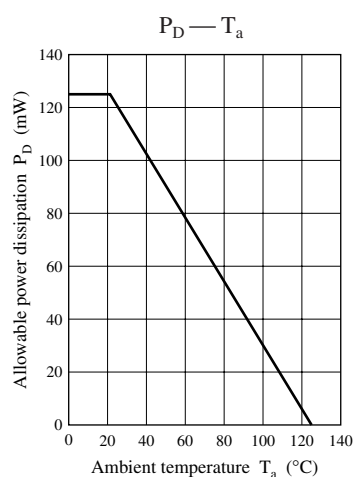
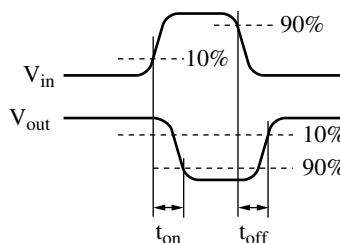
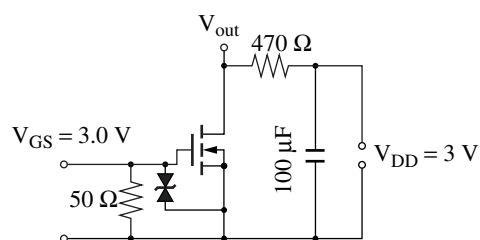
Internal Connection



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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain to source voltage	V_{DSS}	$I_D = 10 \mu\text{A}$, $V_{GS} = 0$	50			V
Drain cut-off current	I_{DSS}	$V_{DS} = 50 \text{ V}$, $V_{GS} = 0$			1.0	μA
Gate cut-off current	I_{GSS}	$V_{GS} = \pm 7 \text{ V}$, $V_{DS} = 0$			± 5	μA
Gate threshold voltage	V_{th}	$I_D = 1 \mu\text{A}$, $V_{DS} = 3 \text{ V}$	0.9	1.2	1.5	V
Drain on-state resistance	$R_{DS(on)}$	$I_D = 10 \text{ mA}$, $V_{GS} = 2.5 \text{ V}$		8	15	Ω
		$I_D = 10 \text{ mA}$, $V_{GS} = 4.0 \text{ V}$		6	12	
Forward transfer admittance	$ Y_{fs} $	$I_D = 10 \text{ mA}$, $V_{DS} = 4.0 \text{ V}$	20	60		mS
Input capacitance	C_{iss}	$V_{DS} = 3 \text{ V}$, $V_{GS} = 0 \text{ V}$, $f = 1 \text{ MHz}$		12		pF
Output capacitance	C_{oss}			7		pF
Reverse transfer capacitance	C_{rss}			3		pF
Turn-on time *	t_{on}	$V_{DD} = 3 \text{ V}$, $V_{GS} = 0 \text{ V}$ to 3 V , $R_L = 470 \Omega$		200		ns
Turn-off time *	t_{off}	$V_{DD} = 3 \text{ V}$, $V_{GS} = 3 \text{ V}$ to 0 V , $R_L = 470 \Omega$		200		ns

Note) *: Refer to t_{on} , t_{off} test circuit (next page)

t_{on} , t_{off} Test circuit

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