

UP04979G

Silicon N-channel MOSFET (Tr1)
Silicon P-channel MOSFET (Tr2)

For switching

■ Features

- High-speed switching
- Incorporating a built-in gate protection-diode
- Two elements incorporated into one package (Each transistor is separated)
- Reduction of the mounting area and assembly cost by one half

■ Basic Part Number

- 2SJ0672 + 2SK3539G

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

	Parameter	Symbol	Rating	Unit
Tr1	Drain-source surrender voltage	V_{DSS}	50	V
	Gate-source voltage (Drain open)	V_{GSO}	± 7	V
	Drain current	I_D	100	mA
	Peak drain current	I_{DP}	200	mA
Tr2	Drain-source surrender voltage	V_{DSS}	-30	V
	Gate-source voltage (Drain open)	V_{GSO}	± 7	V
	Drain current	I_D	-100	mA
	Peak drain current	I_{DP}	-200	mA
Overall	Total power dissipation *	P_T	125	mW
	Channel temperature	T_{ch}	125	$^\circ\text{C}$
	Storage temperature	T_{stg}	-55 to +125	$^\circ\text{C}$

注) *: 基板(17 mm × 10 mm × 1 mm) 上で測定

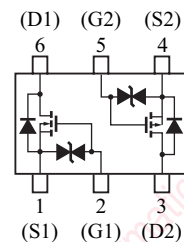
■ Package

- Code
SSMini6-F2
- Pin Name

1: Source (FET1)	4: Source (FET2)
2: Gate (FET1)	5: Gate (FET2)
3: Drain (FET2)	6: Drain (FET1)

■ Marking Symbol: 4T

■ Internal Connection



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

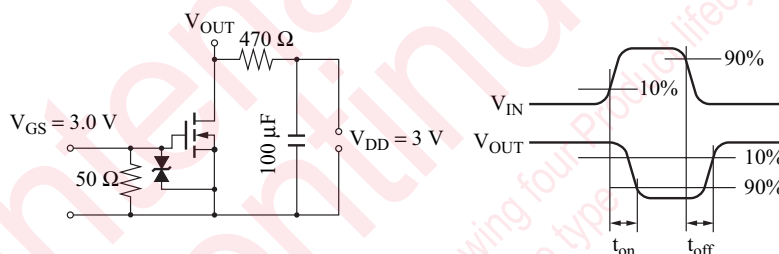
• Tr1

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain-source surrender voltage	V_{DSS}	$I_D = 10 \mu\text{A}, V_{GS} = 0$	50			V
Drain-source cutoff current	I_{DSS}	$V_{DS} = 30 \text{ V}, V_{GS} = 0$			1.0	μA
Gate-source cutoff current	I_{GSS}	$V_{GS} = \pm 7 \text{ V}, V_{DS} = 0$			± 10	μA
Gate threshold voltage	V_{th}	$I_D = 1.0 \mu\text{A}, V_{DS} = 3.0 \text{ V}$	0.5	1.0	1.5	V
Drain-source ON 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 conductance	Y_{fs}	$I_D = 10 \text{ mA}, V_{DS} = 3.0 \text{ V}$	20	60		mS
Turn-on time *	t_{on}	$V_{DD} = 3 \text{ V}, V_{GS} = 0 \text{ V to } 3 \text{ V}, I_D = 10 \text{ mA}$		200		ns
Turn-off time *	t_{off}	$V_{DD} = 3 \text{ V}, V_{GS} = 3 \text{ V to } 0 \text{ V}, I_D = 10 \text{ mA}$		200		ns

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

2. *: Refer to t_{on}, t_{off} test circuit.

t_{on}, t_{off} Test circuit (Tr1)



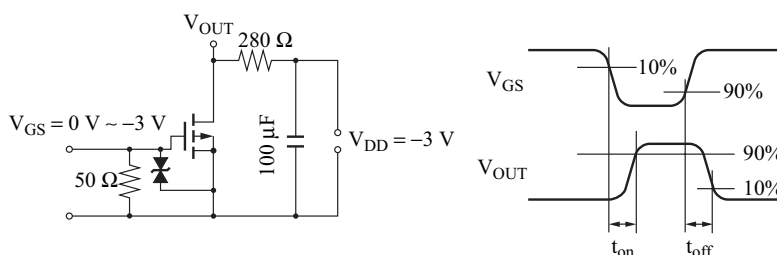
• Tr2

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain-source surrender voltage	V_{DSS}	$I_D = -10 \mu\text{A}, V_{GS} = 0$	-30			V
Drain-source cutoff current	I_{DSS}	$V_{DS} = -20 \text{ V}, V_{GS} = 0$			-1.0	μA
Gate-source cutoff current	I_{GSS}	$V_{GS} = \pm 7 \text{ V}, V_{DS} = 0$			± 10	μA
Gate threshold voltage	V_{th}	$I_D = -1.0 \mu\text{A}, V_{DS} = -3.0 \text{ V}$	-0.5	-1.0	-1.5	V
Drain-source ON resistance	$R_{DS(on)}$	$I_D = -10 \text{ mA}, V_{GS} = -2.5 \text{ V}$		25	45	Ω
		$I_D = -10 \text{ mA}, V_{GS} = -4.0 \text{ V}$		15	30	
Forward transfer conductance	Y_{fs}	$I_D = -10 \text{ mA}, V_{DS} = -3.0 \text{ V}$	20	35		mS
Turn-on time *	t_{on}	$V_{DD} = -3 \text{ V}, V_{GS} = 0 \text{ V to } -3 \text{ V}, I_D = -10 \text{ mA}$		850		ns
Turn-off time *	t_{off}	$V_{DD} = -3 \text{ V}, V_{GS} = -3 \text{ V to } 0 \text{ V}, I_D = -10 \text{ mA}$		850		ns

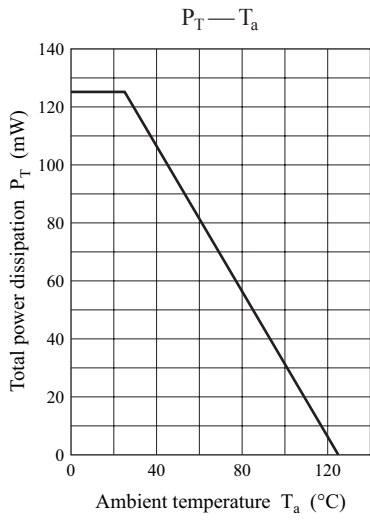
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *: Refer to t_{on}, t_{off} test circuit.

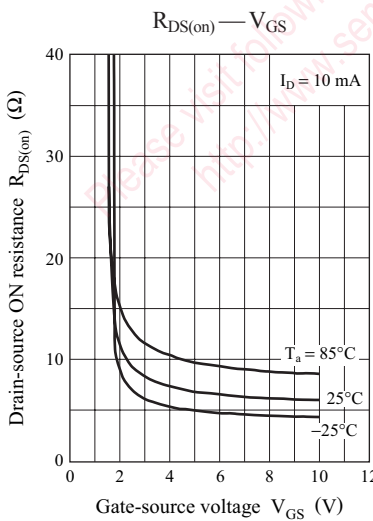
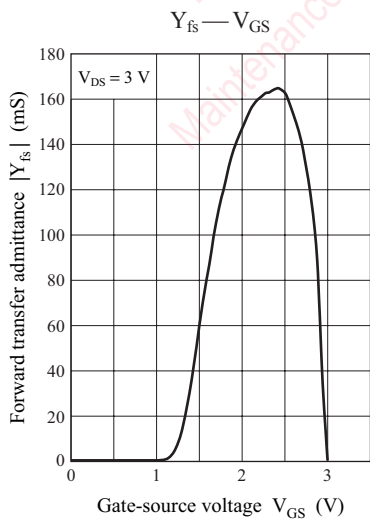
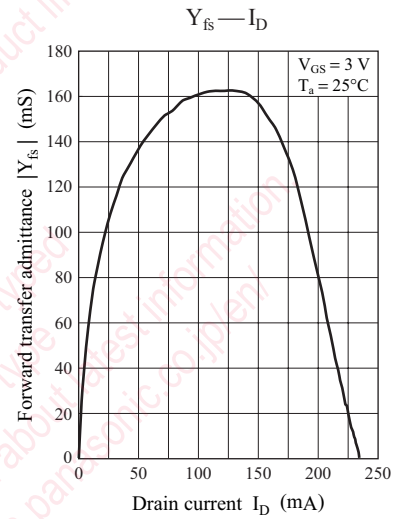
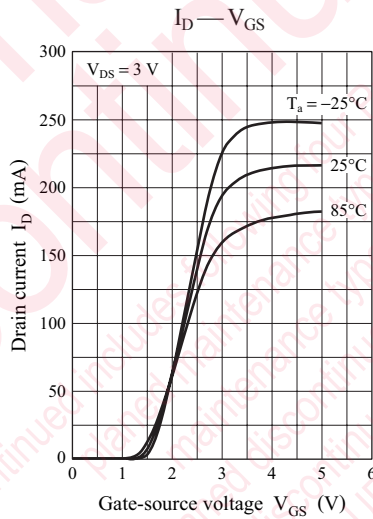
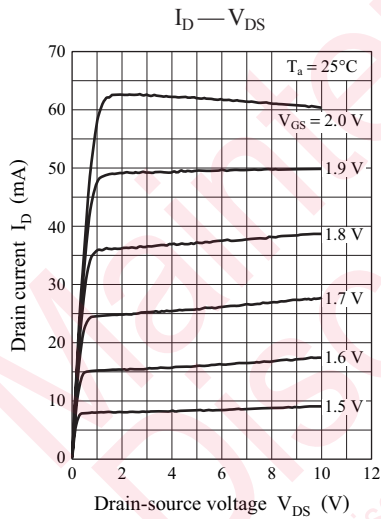
t_{on}, t_{off} Test circuit (Tr2)



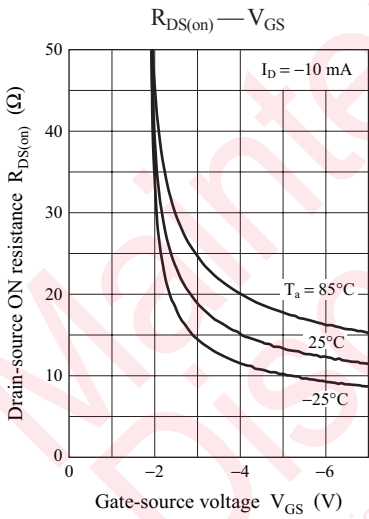
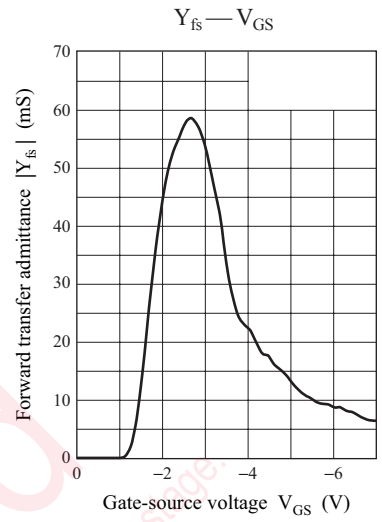
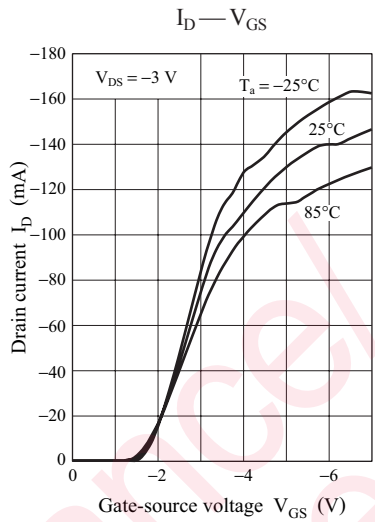
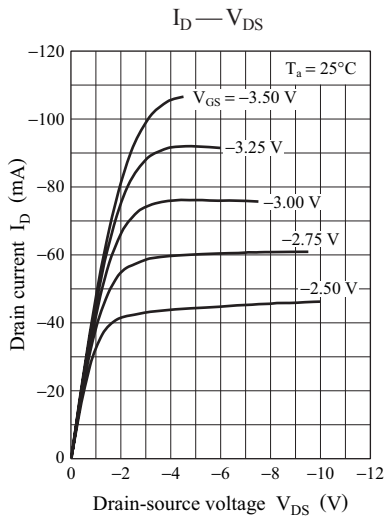
Common characteristics chart



Characteristics charts of Tr1

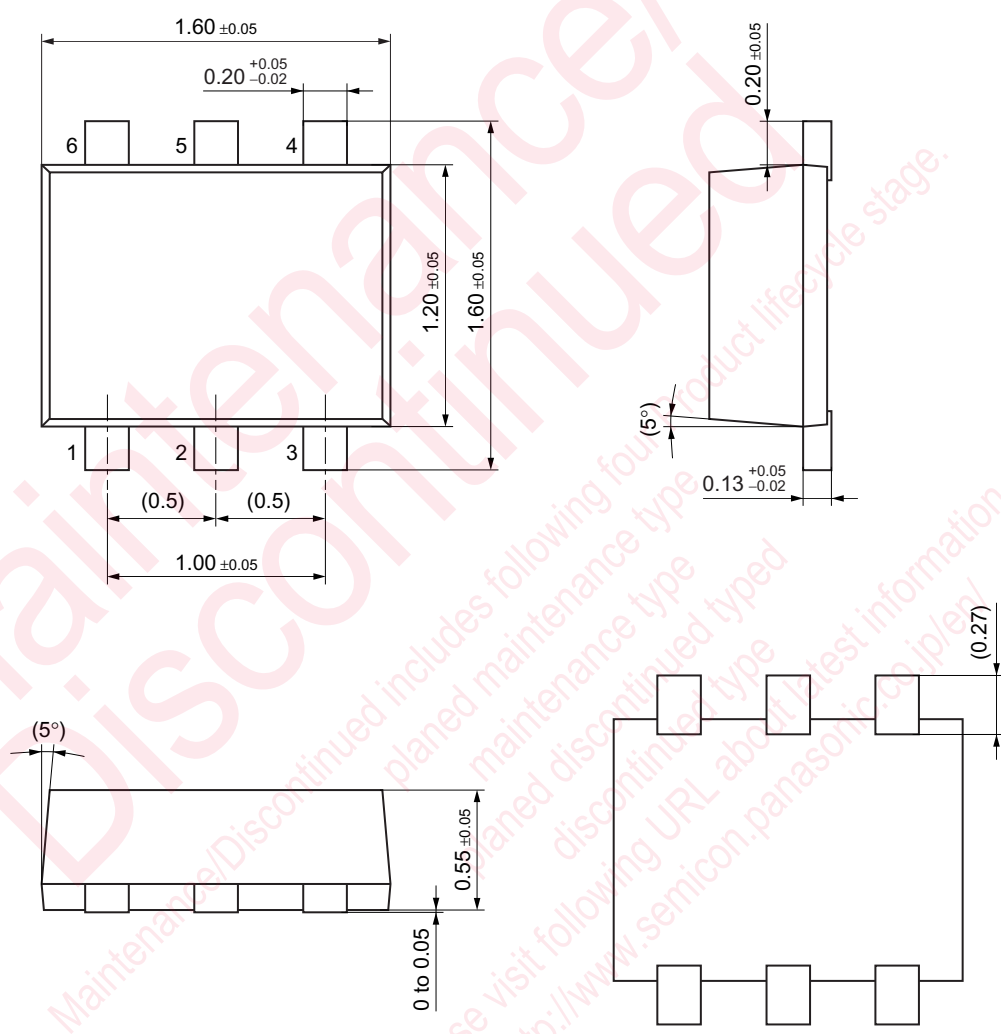


Characteristics charts of Tr2



SSMini6-F2

Unit: mm



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