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 $T_a = 25°C$

	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	°C
	Storage temperature	T_{stg}	–55 to +125	°C

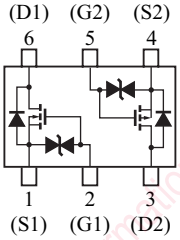
注) * : 基板(17 mm × 10 mm × 1 mm)上で測定

■ 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°C±3°C

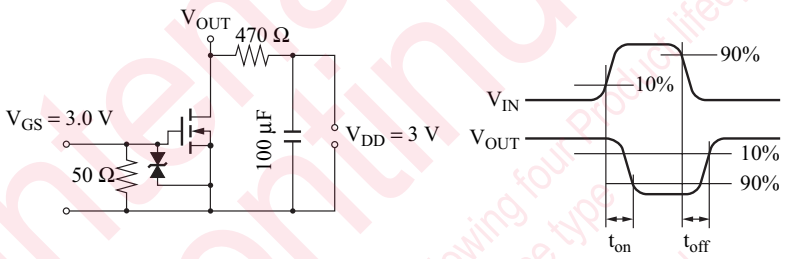
• Tr1

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain-source surrender voltage	V_{DSS}	I_D = 10 µA, V_{GS} = 0	50			V
Drain-source cutoff current	I_{DSS}	V_{DS} = 30 V, V_{GS} = 0			1.0	µA
Gate-source cutoff current	I_{GSS}	V_{GS} = ±7 V, V_{DS} = 0			±10	µA
Gate threshold voltage	V_{th}	I_D = 1.0 µA, V_{DS} = 3.0 V	0.5	1.0	1.5	V
Drain-source ON resistance	$R_{DS(on)}$	I_D = 10 mA, V_{GS} = 2.5 V		8	15	Ω
		I_D = 10 mA, V_{GS} = 4.0 V		6	12	
Forward transfer conductance	Y_{fs}	I_D = 10 mA, V_{DS} = 3.0 V	20	60		mS
Turn-on time *	t_{on}	V_{DD} = 3 V, V_{GS} = 0 V to 3 V, I_D = 10 mA		200		ns
Turn-off time *	t_{off}	V_{DD} = 3 V, V_{GS} = 3 V to 0 V, I_D = 10 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)



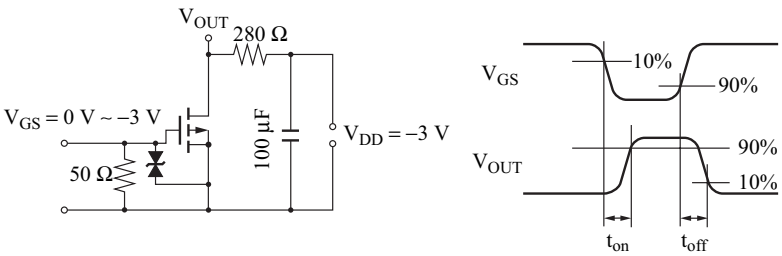
• Tr2

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

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

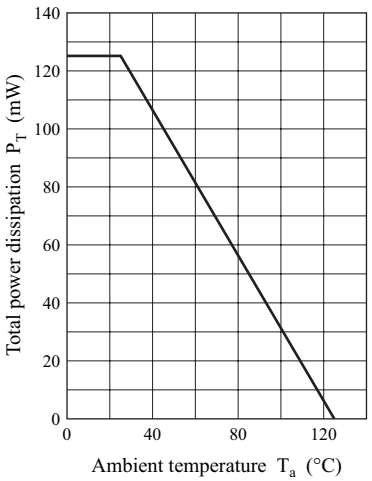
2. *: Refer to t_{on}, t_{off} test circuit.

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



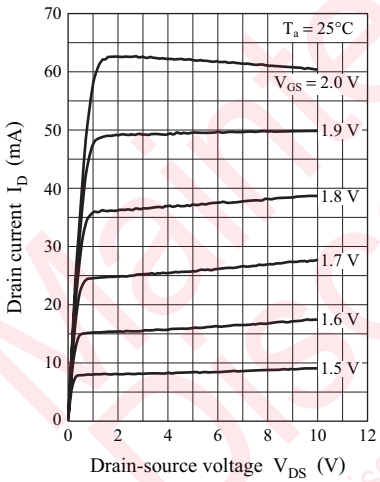
Common characteristics chart

P_T — T_a

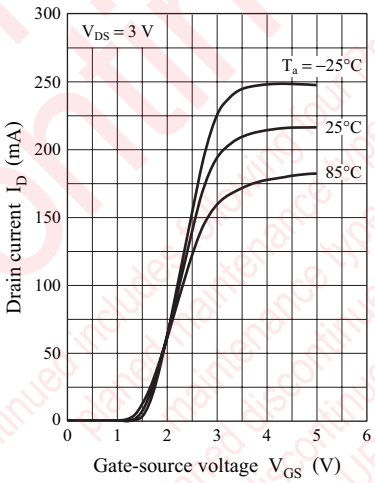


Characteristics charts of Tr1

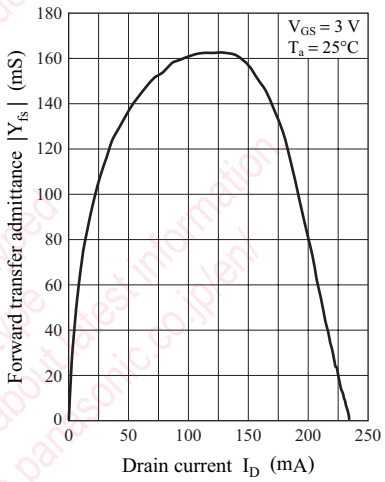
I_D — V_{DS}



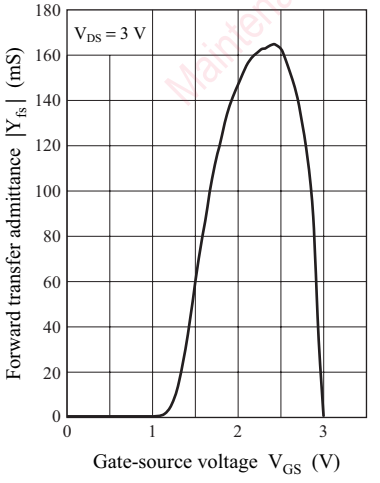
I_D — V_{GS}



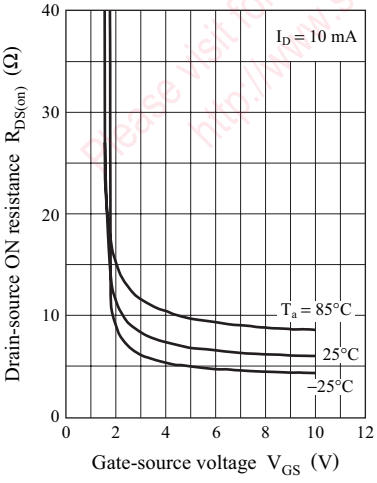
Y_{fs} — I_D



Y_{fs} — V_{GS}

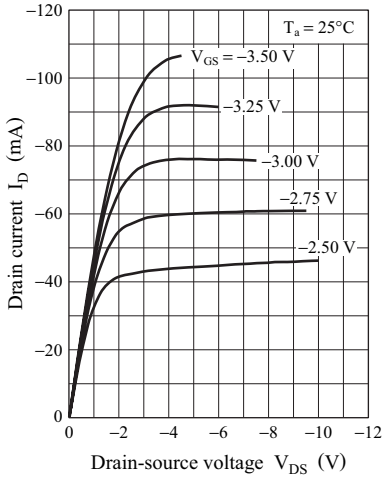


$R_{DS(on)}$ — V_{GS}

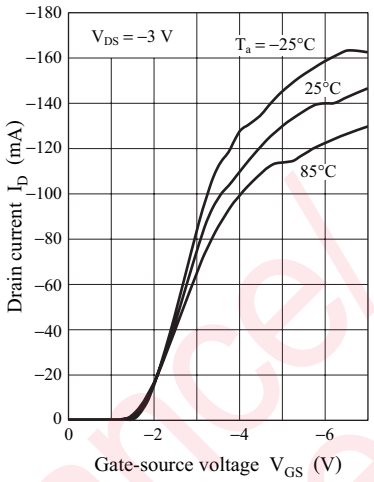


Characteristics charts of Tr2

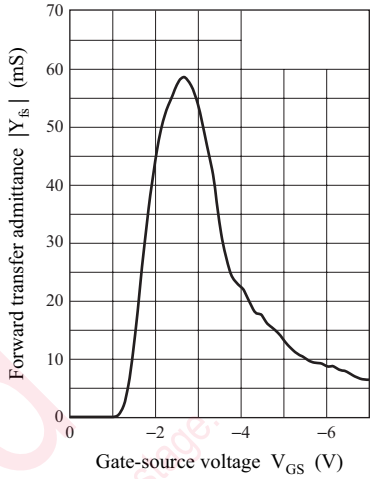
I_D — V_{DS}



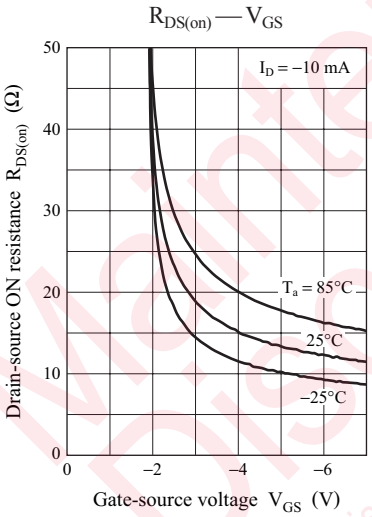
I_D — V_{GS}



Y_{fs} — V_{GS}

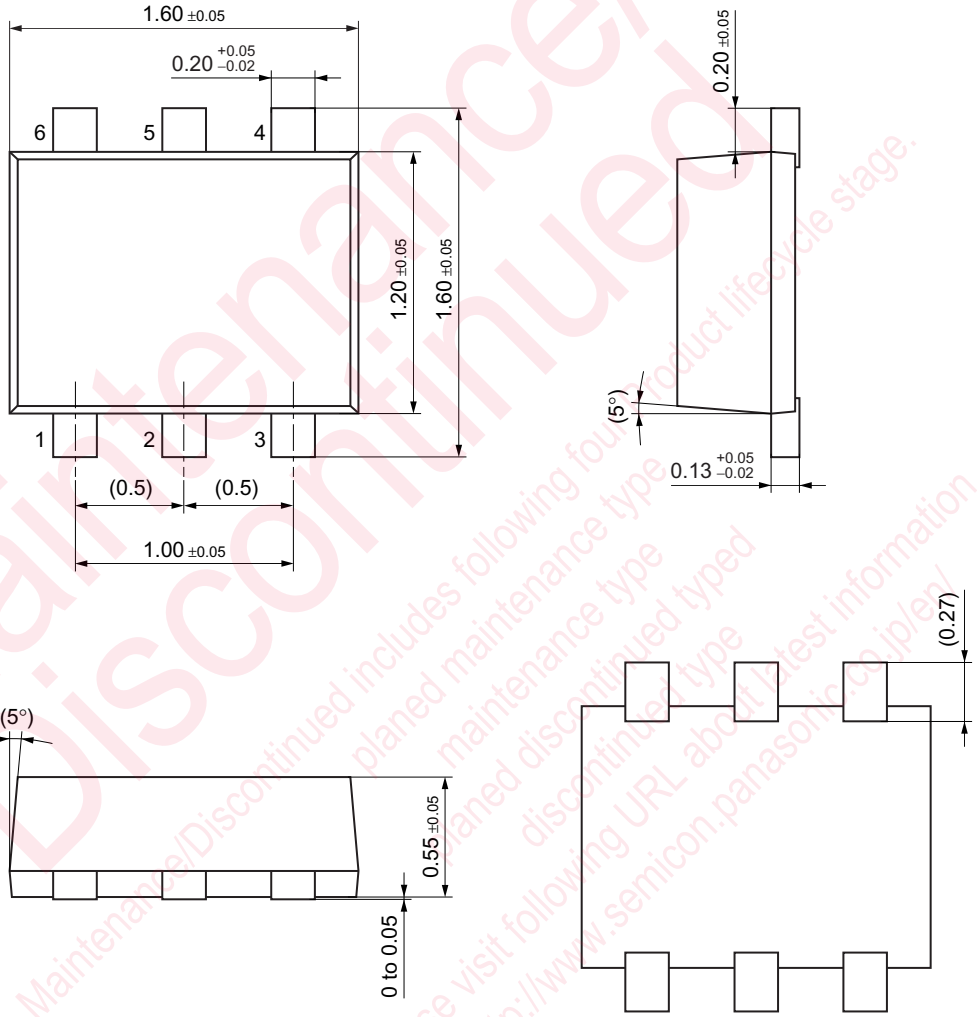


$R_{DS(on)}$ — V_{GS}



SSMini6-F2

Unit: mm



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