2SK3539

Silicon N-channel MOSFET

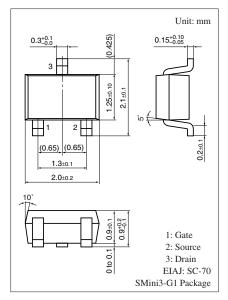
For switching

Features

- High-speed switching
- Wide frequency band
- Gate protection diode built-in

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

Parameter	Symbol	Rating	Unit	
Drain-source voltage	V _{DS}	50	V	
Gate-source voltage (Drain open)	V _{GSO}	±7	V	
Drain current	ID	100	mA	
Peak drain current	I _{DP}	200	mA	
Power dissipation	P _D	150	mW	
Channel temperature	T _{ch}	150	°C	
Storage temperature	T _{stg}	-55 to +150	°C	



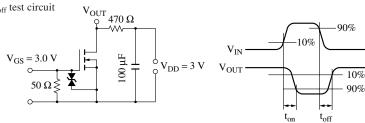
Marking Symbol: 5F

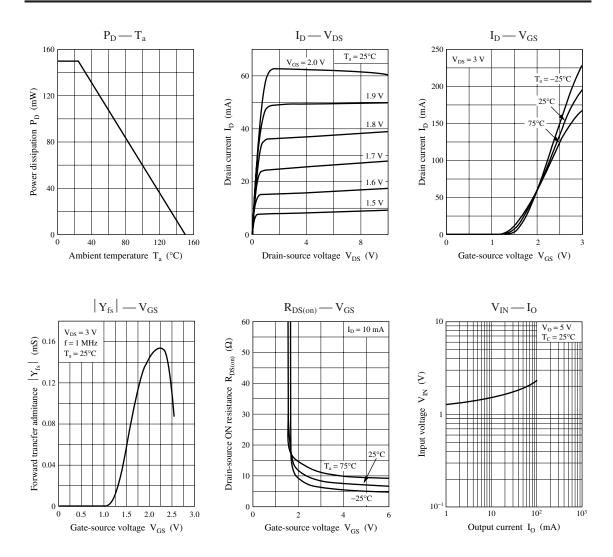
Electrical Characteristics $T_a = 25^{\circ}C \pm 3^{\circ}C$

Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Drain-source surrender voltage	V _{DSS}	$I_D = 10 \ \mu A, \ V_{GS} = 0$	50			V
Drain-source cutoff current	I _{DSS}	$V_{DS} = 50 \text{ V}, V_{GS} = 0$			1.0	μΑ
Gate-Source cutoff current	I _{GSS}	$V_{GS} = \pm 7 V, V_{DS} = 0$			±5.0	μΑ
Gate threshold voltage	V_{th}	$I_D = 1.0 \ \mu A, \ V_{DS} = 3 \ V$	0.9	1.2	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 trancfer admitance	Y _{fs}	$I_D = 10 \text{ mA}, V_{DS} = 3 \text{ V}, f = 1 \text{ kHz}$	20	60		mS
Short-circuit forward transfer capacitance (Common source)	C _{iss}	$V_{DS} = 3 V, V_{GS} = 0, f = 1 MHz$		12		pF
Short-circuit output capacitance (Common source)	C _{oss}			7		pF
Reverse transfer capacitance (Common source)	C _{rss}			3		pF
Turn-on time *	t _{on}	V_{DD} = 3 V, V_{GS} = 0 V to 3 V, R_L = 470 Ω		200		ns
Turn-off time *	t _{off}	V_{DD} = 3 V, V_{GS} = 3 V to 0 V, R_L = 470 Ω		200		ns

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

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





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