Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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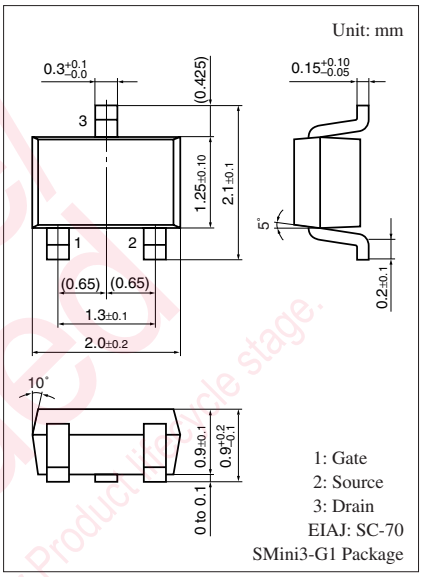
2SK3539

Silicon N-channel MOSFET

For switching

■ Features

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



Marking Symbol: 5F

■ Absolute Maximum Ratings $T_a = 25°C$

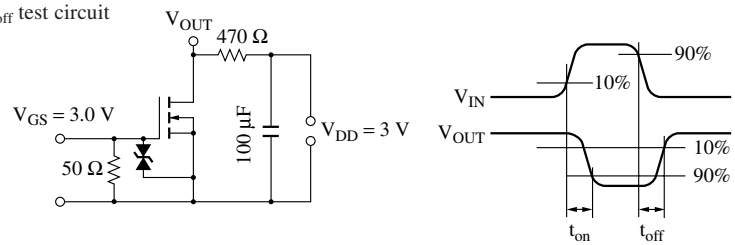
Parameter	Symbol	Rating	Unit
Drain-source voltage	V_{DS}	50	V
Gate-source voltage (Drain open)	V_{GSO}	±7	V
Drain current	I_D	100	mA
Peak drain current	I_{DP}	200	mA
Power dissipation	P_D	150	mW
Channel temperature	T_{ch}	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

■ Electrical Characteristics $T_a = 25°C \pm 3°C$

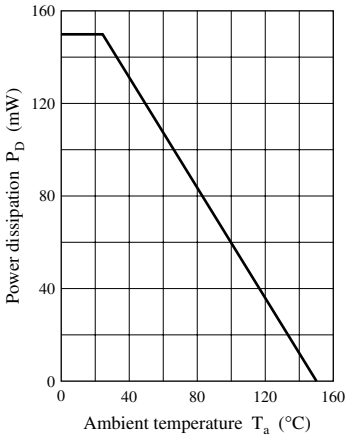
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain-source surrender voltage	V_{DSS}	I_D = 10 µA, V_{GS} = 0	50			V
Drain-source cutoff current	I_{DSS}	V_{DS} = 50 V, V_{GS} = 0			1.0	µA
Gate-Source cutoff current	I_{GSS}	V_{GS} = ±7 V, V_{DS} = 0			±5.0	µA
Gate threshold voltage	V_{th}	I_D = 1.0 µA, V_{DS} = 3 V	0.9	1.2	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 trancfer admitance	$\|Y_{fs}\|$	I_D = 10 mA, V_{DS} = 3 V, f = 1 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.

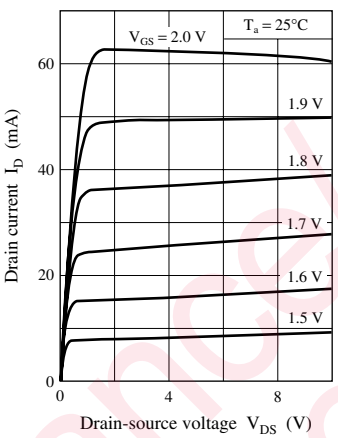
2. *: t_{on} , t_{off} test circuit



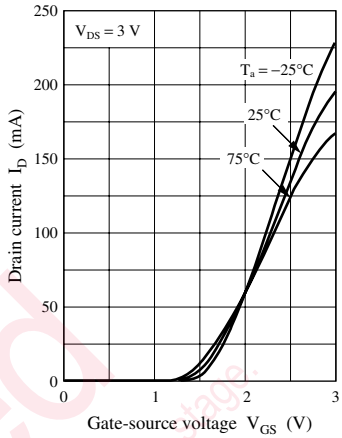
P_D — T_a



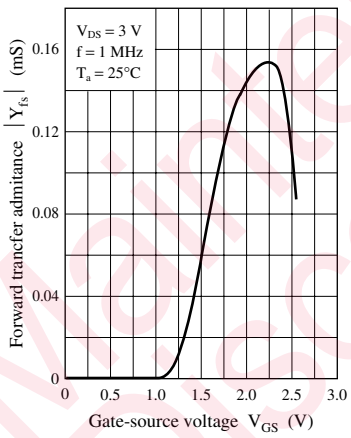
I_D — V_{DS}



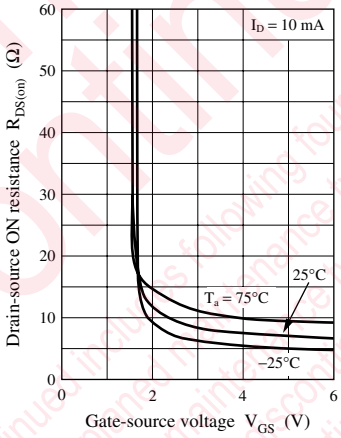
I_D — V_{GS}



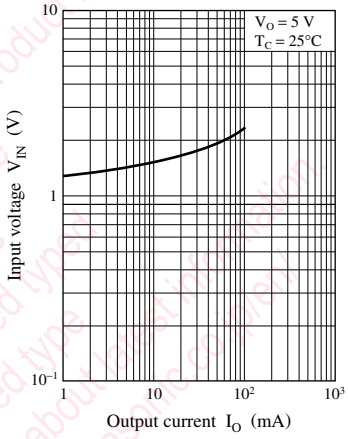
$|Y_{fs}|$ — V_{GS}



$R_{DS(on)}$ — V_{GS}



V_{IN} — I_O



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