2SK0665 (2SK665)

Silicon N-channel MOSFET

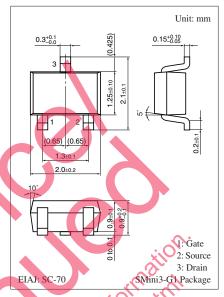
For switching circuits

■ Features

- High-speed switching
- Small drive current owing to high input inpedance
- High electrostatic breakdown voltage

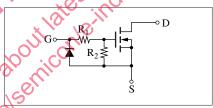
■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit	
Drain-source voltage	V _{DS}	20	V	
Gate-source voltage (Drain open)	V_{GSO}	8	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	



Marking Symbol: 30

Internal Connection



■ Electrical Characteristics $T_a = 25^{\circ}C \pm 2^{\circ}C$

Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Drain-source surrender voltage	V _{DSS}	$I_D = 100 \text{ pA}, V_{GS} = 0$	20			V
Drain-source cutoff current	$I_{ m DSS}$	$V_{DS} = 10 \text{ V}, V_{OS} = 0$			10	μΑ
Gate-source cutoff current	I_{GSS}	$V_{GS} = 8 V_{OV} V_{DS} = 0$	40		80	μΑ
Gate threshold voltage	V _{th}	$I_D = 100 \mu\text{A}, V_{DS} = V_{GS}$	1.5		3.5	V
Forward transfer admittance	$ \mathcal{V}_{f_{S}} $	$I_D = 20 \text{ mA}, V_{DS} = 5 \text{ V}, f = 1 \text{ kHz}$	20			mS
Drain-source ON resistance	R _{DS(on)}	$I_D = 20 \text{ mA}, V_{GS} = 5 \text{ V}$			50	Ω
Output voltage high-level	V _{OH}	$V_{DD} = 5 \text{ V}, V_{GS} = 1 \text{ V}, R_{L} = 200 \Omega$	4.5			V
Output voltage low-level	V _{OL}	$V_{DD} = 5 \text{ V}, V_{GS} = 5 \text{ V}, R_{L} = 200 \Omega$			1.0	V
Input resistance *1	R ₁ +R ₂		100		200	kΩ
Turn-on time *2, 3	t _{on}	$V_{DD} = 5 \text{ V}, V_{GS} = 0 \text{ V} \text{ to } 5 \text{ V}, R_L = 200 \Omega$			1.0	μs
Turn-off time *2, 3	t _{off}	$V_{DD} = 5 \text{ V}, V_{GS} = 5 \text{ V} \text{ to } 0 \text{ V}, R_L = 200 \Omega$			1.0	μs

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

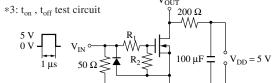
Note) The part number in the parenthesis shows conventional part number.

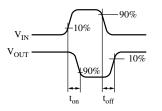
■ Electrical Characteristics (continued)

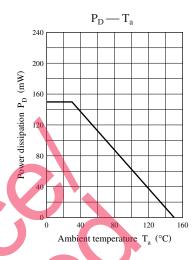
Note) (continued)

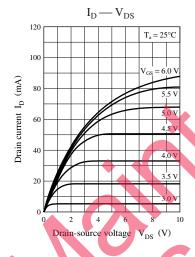
2. *1: Resistance ratio $R_1/R_2 = 1/50$ (typ.)

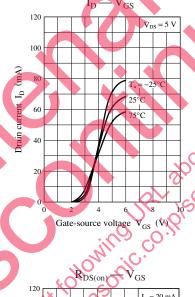
*2: Pulse measurement

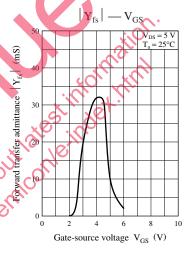


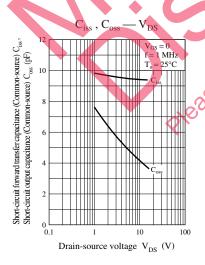


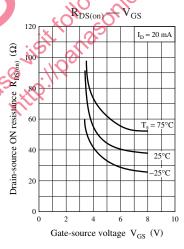


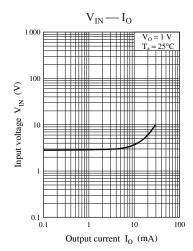












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