## 2SK1228

### Silicon N-channel MOSFET

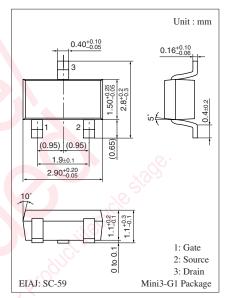
#### For switching circuits

#### ■ Features

- High-speed switching
- Wide frequency band
- Incorporating a built-in gate protection-diode
- Allowing 2.5 V drive

## ■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit	
Drain-source voltage	V <sub>DS</sub>	50	V	
Gate-source voltage (Drain open)	$V_{GSO}$	10	V	
Drain current	$I_D$	50	mA	
Peak drain current	$I_{DP}$	100	mA	
Power dissipation	$P_{\mathrm{D}}$	150	mW	
Channel temperature	T <sub>ch</sub>	150	°C	
Storage temperature	T <sub>stg</sub>	-55 to +150	°C	



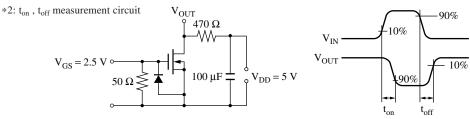
Marking Symbol: 4V

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

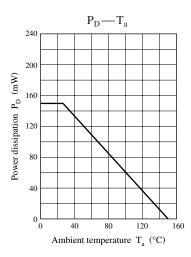
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Drain-source surrender voltage	V <sub>DSS</sub>	$I_D = 10 \mu\text{A},  V_{GS} = 0$	50	100	11.	V
Drain-source cutoff current	$I_{DSS}$	$V_{DS} = 20 \text{ V}, V_{GS} = 0$	100	×62	1.0	μΑ
Gate-source cutoff current	$I_{GSS}$	$V_{GS} = 10 \text{ V}, V_{DS} = 0$	2.1	, 'C	1.0	μΑ
Gate threshold voltage	V <sub>th</sub>	$I_D = 100 \mu\text{A},  V_{DS} = 5  \text{V}$	0.5	0.8	1.1	V
Forward transfer admittance	Yfs	$I_D = 10 \text{ mA}, V_{DS} = 5 \text{ V}, f = 1 \text{ kHz}$	20	39		mS
Drain-source ON resistance	R <sub>DS(on)</sub>	$I_D = 10 \text{ mA}, V_{GS} = 2.5 \text{ V}$	00,	27	50	Ω
Short-circuit forward transfer capacitance (Common source)	C <sub>iss</sub>	$V_{DS} = 5 \text{ V}, V_{GS} = 0, f = 1 \text{ MHz}$		4.5		pF
Short-circuit output capacitance (Common source)	C <sub>oss</sub>	1. to 110 11 28th.		4.1		pF
Reverse transfer capacitance (Common source)	C <sub>rss</sub>	Sign Happy		1.2		pF
Turn-on time *1, 2	t <sub>on</sub>	$V_{DD} = 5 \text{ V}, V_{GS} = 0 \text{ V to } 2.5 \text{ V}, R_L = 470 \Omega$		0.2		μs
Turn-off time *1, 2	t <sub>off</sub>	$V_{DD} = 5 \text{ V}, V_{GS} = 2.5 \text{ V} \text{ to } 0 \text{ V}, R_{L} = 470 \Omega$		0.2		μs

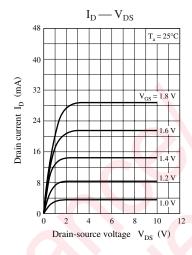
 $Note) \ 1. \ Measuring \ methods \ are \ based \ on \ JAPANESE \ INDUSTRIAL \ STANDARD \ JIS \ C \ 7030 \ measuring \ methods \ for \ transistors.$ 

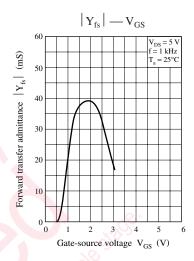
#### 2. \*1: Pulse measurement

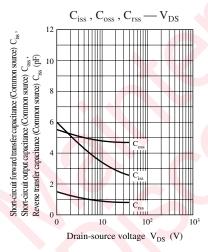


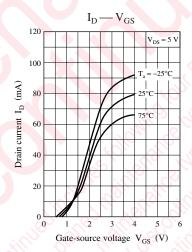
## **Panasonic**

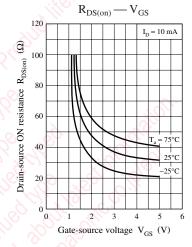


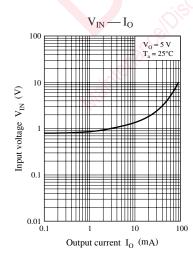












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