

2SK4029

Silicon N-channel MOSFET

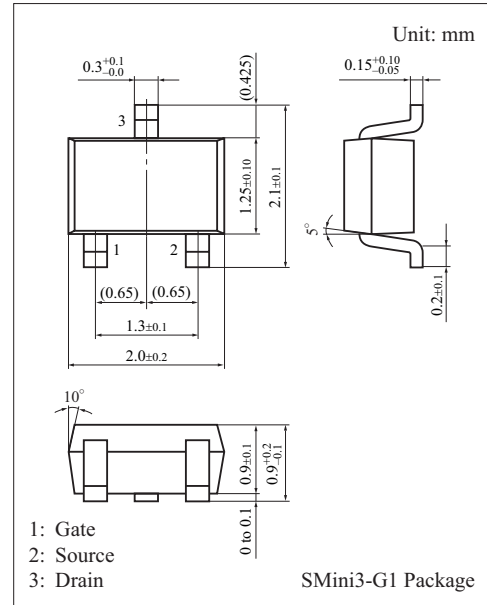
For switching circuits

■ Features

- High-speed switching
- Low ON resistance R_{on}
- Incorporating a built-in gate protection-diode

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

Parameter	Symbol	Rating	Unit
Drain-source surrender voltage	V_{DSS}	25	V
Gate-source surrender voltage	V_{GSS}	± 12	V
Drain current	I_D	1.0	A
Peak drain current	I_{DP}	2.0	A
Power dissipation	P_D	500	mW
Channel temperature	T_{ch}	125	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +125	$^\circ\text{C}$



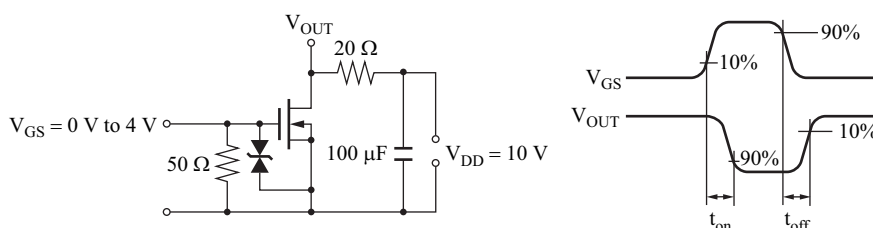
Marking Symbol: 5Z

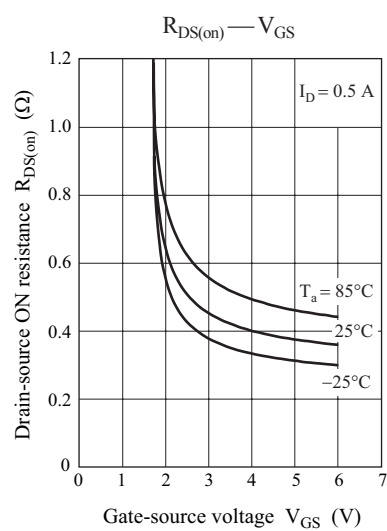
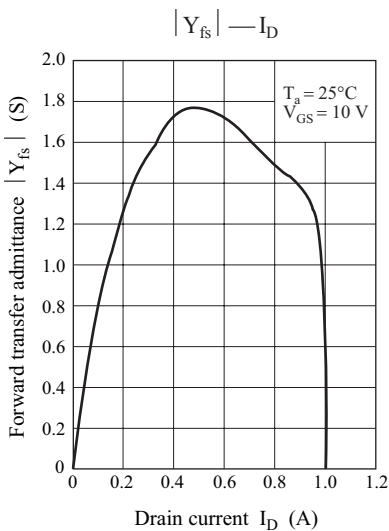
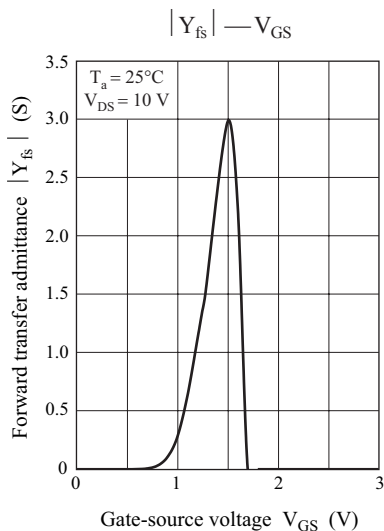
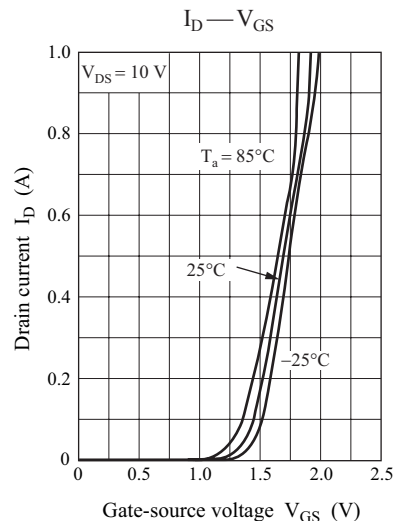
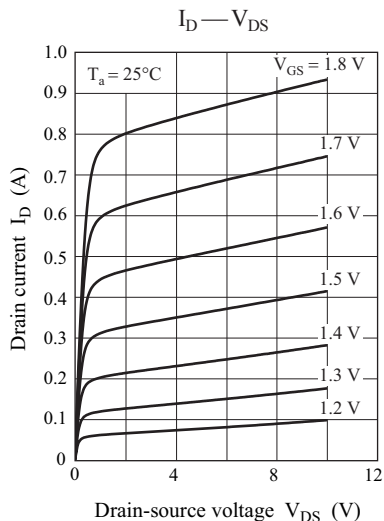
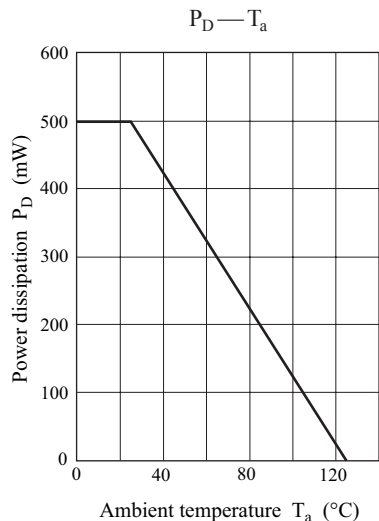
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain-source surrender voltage	V_{DSS}	$I_D = 1 \text{ mA}, V_{GS} = 0$	25			V
Drain-source cutoff current	I_{DSS}	$V_{DS} = 20 \text{ V}, V_{GS} = 0$			1.0	μA
Gate-source cutoff current	I_{GSS}	$V_{GS} = \pm 8 \text{ V}, V_{DS} = 0$			± 10	μA
Gate threshold voltage	V_{TH}	$I_D = 1 \text{ mA}, V_{DS} = 10 \text{ V}$	0.4	0.9	1.4	V
Drain-source ON resistance	$R_{DS(on)}$	$I_D = 0.5 \text{ A}, V_{GS} = 4.0 \text{ V}$		260	420	m Ω
		$I_D = 0.25 \text{ A}, V_{GS} = 2.5 \text{ V}$		350	550	
Forward transfer admittance	$ Y_{fs} $	$I_D = 500 \text{ mA}, V_{DS} = 10 \text{ V}$		1.8		S
Short-circuit forward transfer capacitance (Common source)	C_{iss}	$V_{DS} = 10 \text{ V}, V_{GS} = 0, f = 1 \text{ MHz}$		65		pF
Short-circuit output capacitance (Common source)	C_{oss}				35	pF
Reverse transfer capacitance (Common source)	C_{rss}				13	pF
Turn-on time *	t_{on}	$V_{DD} = 10 \text{ V}, V_{GS} = 0 \text{ V to } 4 \text{ V}, I_D = 0.5 \text{ A}$		8		ns
Turn-off time *	t_{off}	$V_{DD} = 10 \text{ V}, V_{GS} = 4 \text{ V to } 0 \text{ V}, I_D = 0.5 \text{ A}$		30		ns

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

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





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