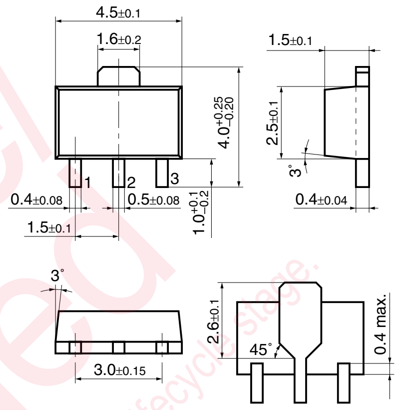
2SK2211

Silicon N-channel MOSFET

For switching circuits



■ Features

- Low ON resistance
- High-speed switching
- Mini type package, allowing downsizing of the sets and automatic insertion through the magazine packing

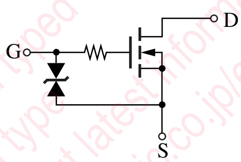
■ Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Drain-source surrender voltage	V_{DSS}	30	V
Gate-source surrender voltage	V_{GSS}	±20	V
Drain current	I_D	1.0	A
Peak drain current	I_{DP}	2.0	A
Power dissipation *	P_D	1.0	W
Channel temperature	T_{ch}	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

Note) *: PC board: Copper foil of the drain portion should have a area of 1 cm² or more and the board thickness should be 1.7 mm.
P_C absolute maximum rating without a heat shink: 0.5 W

Marking Symbol: 2M

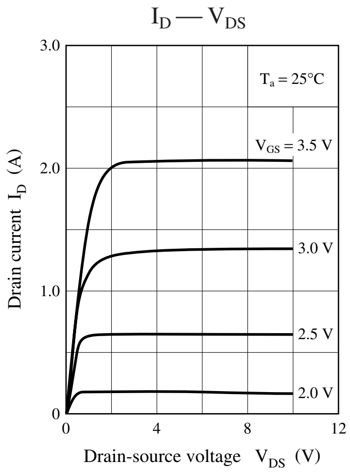
Internal Connection

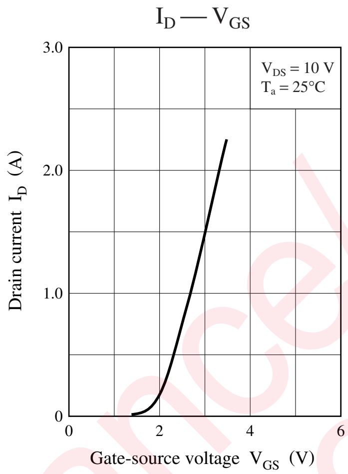


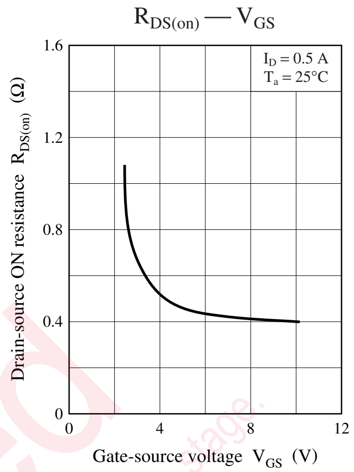
■ Electrical Characteristics $T_a = 25°C \pm 3°C$

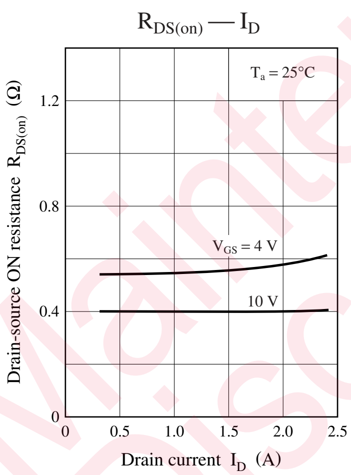
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain-source surrender voltage	V_{DSS}	$I_D = 0.1$ mA, $V_{GS} = 0$	30			V
Gate-source surrender voltage	V_{GSS}	$I_{GS} = 0.1$ mA, $V_{DS} = 0$	±20			V
Drain-source cutoff current	I_{DSS}	$V_{DS} = 25$ V, $V_{GS} = 0$			10	µA
Gate-source cutoff current	I_{GSS}	$V_{GS} = \pm 15$ V, $V_{DS} = 0$			±10	µA
Gate threshold voltage	V_{th}	$V_{DS} = 5$ V, $I_D = 1$ mA	0.8		2.0	V
Forward transfer admittance *	$\lvert Y_{fs} \rvert$	$V_{DS} = 10$ V, $I_D = 0.5$ A	0.5			S
Drain-source ON resistance *	$R_{DS(on)1}$	$V_{GS} = 4$ V, $I_D = 0.5$ A		0.48	0.75	Ω
	$R_{DS(on)2}$	$V_{GS} = 10$ V, $I_D = 0.5$ A		0.35	0.60	
Short-circuit forward transfer capacitance (Common source)	C_{iss}	$V_{DS} = 10$ V, $V_{GS} = 0$, f = 1 MHz		87		pF
Short-circuit output capacitance (Common source)	C_{oss}			69		pF
Reverse transfer capacitance (Common source)	C_{rss}			23		pF
Turn-on delay time	$t_{d(on)}$	$V_{GS} = 10$ V, $V_{DD} = 10$ V, $I_D = 0.5$ A,		12		ns
Fall time	t_f	$R_L = 20$ Ω		160		ns
Turn-off delay time	$t_{d(off)}$			60		ns

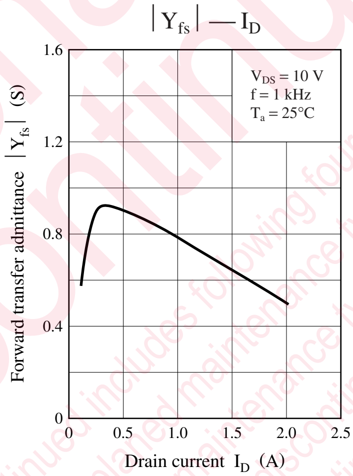
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.
2. *: Pulse measurement

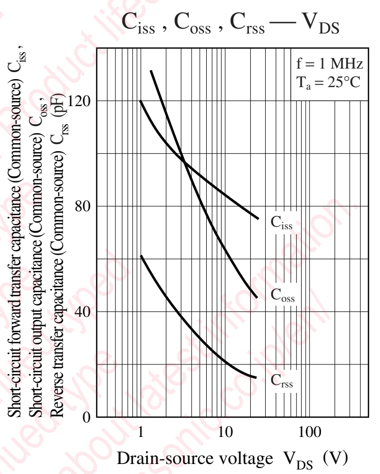












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