

UP0487B

Silicon N-channel MOSFET

For switching circuits

■ Features

- Two elements incorporated into one package (MOSFET × 2)
- Incorporating a built-in gate protection-diode
- Costs can be reduced through downsizing of the equipment and reduction of the number of parts

■ Basic Part Number

- 2SK3938 × 2

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

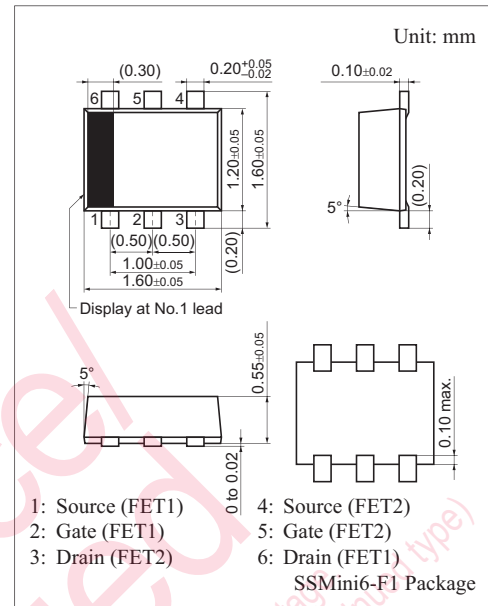
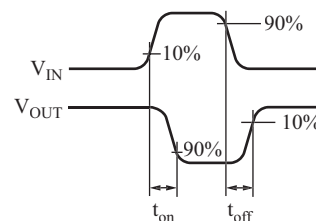
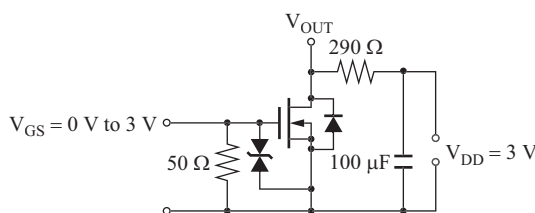
Parameter	Symbol	Rating	Unit
Drain-source surrender voltage	V_{DSS}	30	V
Gate-source surrender voltage	V_{GSS}	±12	V
Drain current	I_D	100	mA
Peak drain current	I_{DP}	200	mA
Total power dissipation	P_T	125	mW
Channel temperature	T_{ch}	125	°C
Storage temperature	T_{stg}	-55 to +125	°C

■ 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}	$I_D = 10 \mu\text{A}, V_{GS} = 0$	30			V
Drain-source cutoff current	I_{DSS}	$V_{DS} = 20 \text{V}, V_{GS} = 0$			1.0	μA
Gate-source cutoff current	I_{GSS}	$V_{GS} = \pm 10 \text{V}, V_{DS} = 0$			±10	μA
Gate threshold voltage	V_{TH}	$I_D = 1.0 \mu\text{A}, V_{DS} = 3.0 \text{V}$	0.5	1.0	1.5	V
Drain-source ON resistance	$R_{DS(on)}$	$I_D = 10 \text{mA}, V_{GS} = 2.5 \text{V}$		7	12	Ω
		$I_D = 10 \text{mA}, V_{GS} = 4.0 \text{V}$		5	8	
Forward transfer admittance	$ Y_{fs} $	$I_D = 10 \text{mA}, V_{DS} = 3.0 \text{V}$	20	55		mS
Short-circuit forward transfer capacitance (Common source)	C_{iss}	$V_{DS} = 3 \text{V}, V_{GS} = 0, f = 1 \text{MHz}$		12		pF
Short-circuit output capacitance (Common source)	C_{oss}			10		pF
Reverse transfer capacitance (Common source)	C_{rss}			6		pF
Turn-on time *	t_{on}	$V_{DD} = 3 \text{V}, V_{GS} = 0 \text{V to } 3 \text{V}, I_D = 10 \text{mA}$		350		ns
Turn-off time *	t_{off}	$V_{DD} = 3 \text{V}, V_{GS} = 3 \text{V to } 0 \text{V}, I_D = 10 \text{mA}$		350		ns

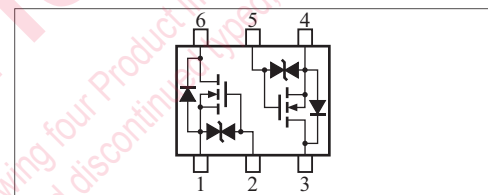
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

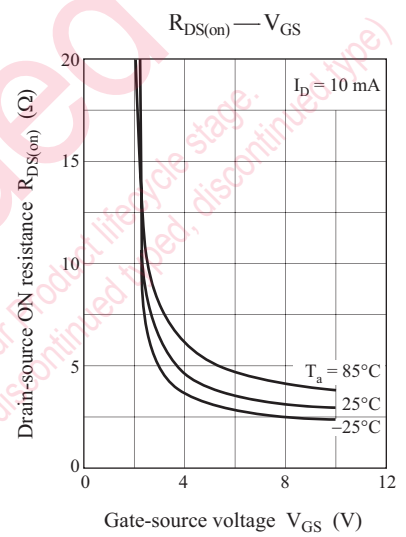
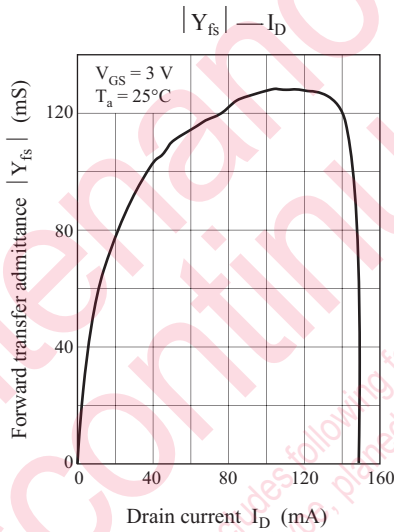
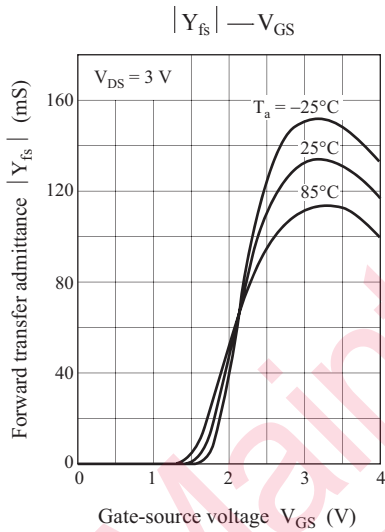
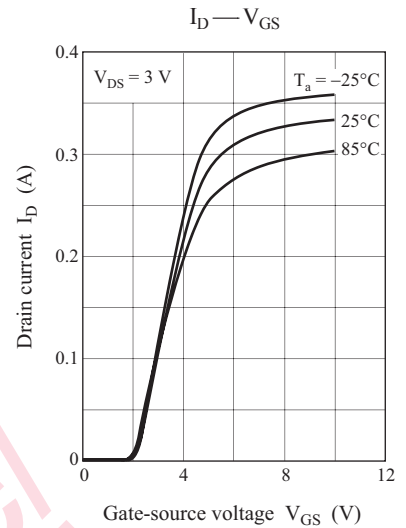
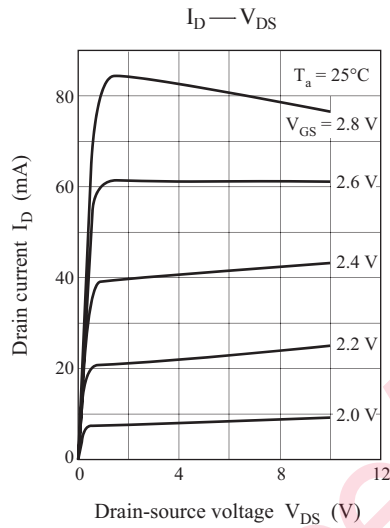
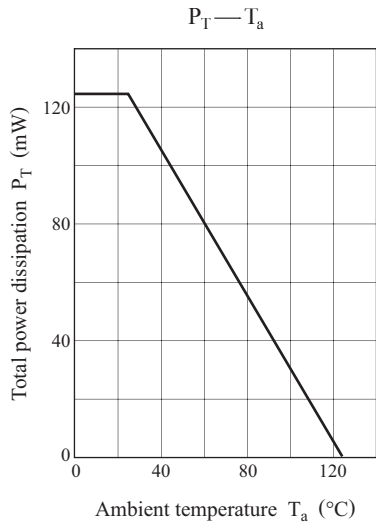
2. * : t_{on}, t_{off} measurement circuit



Marking Symbol: 4H

Internal Connection





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