

To our customers,

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## Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: <http://www.renesas.com>

April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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EOL announced product

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## 2SK2569

### Silicon N Channel MOS FET

REJ03G1018-0300  
Rev.3.00  
Dec 27, 2006

#### Application

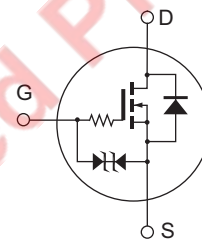
High speed power switching

#### Features

- Low on-resistance.
- $R_{DS(on)} = 2.6 \Omega$  max. (at  $V_{GS} = 4 \text{ V}$ ,  $I_D = 100 \text{ mA}$ )
- 2.5 V gate drive device.
- Small package (MPAK).

#### Outline

RENESAS Package code: PLSP0003ZB-A  
(Package name: MPAK)



1. Source
2. Gate
3. Drain

Note: Marking is "ZN-"

## Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	$V_{DSS}$	50	V
Gate to source voltage	$V_{GSS}$	$\pm 20$	V
Drain current	$I_D$	0.2	A
Drain peak current	$I_{D(pulse)}^{*1}$	0.4	A
Channel dissipation	$P_{ch}^{*2}$	150	mW
Channel temperature	$T_{ch}$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

Note: 1.  $PW \leq 10 \mu s$ , duty cycle  $\leq 1\%$ 

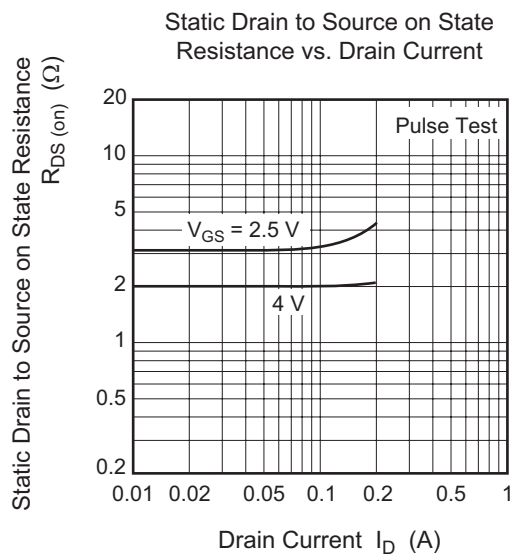
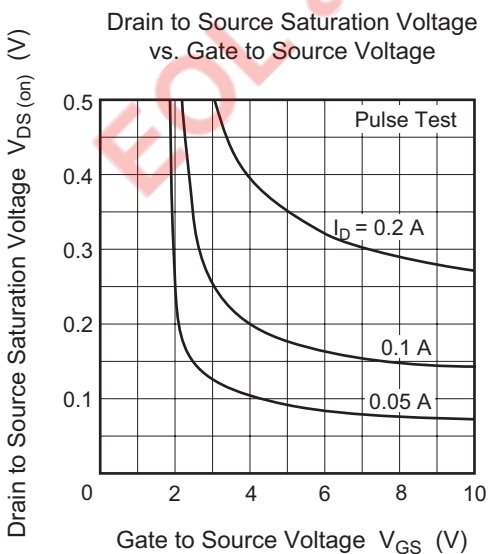
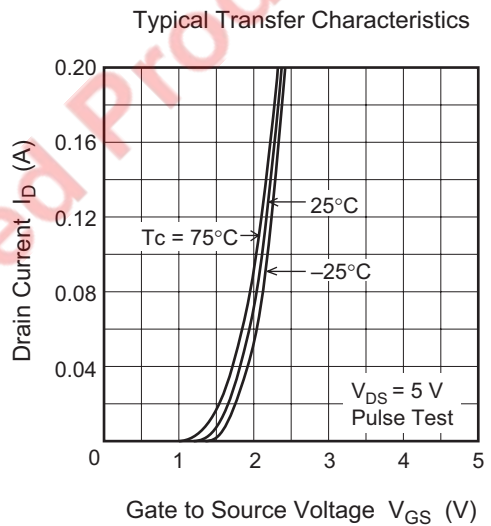
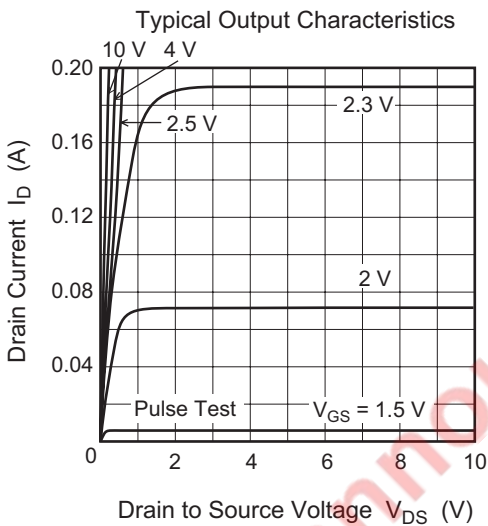
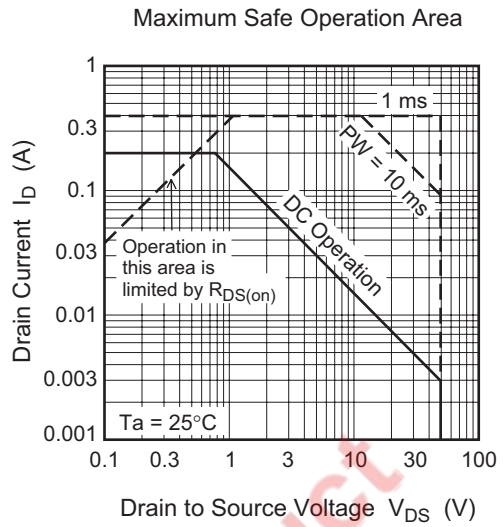
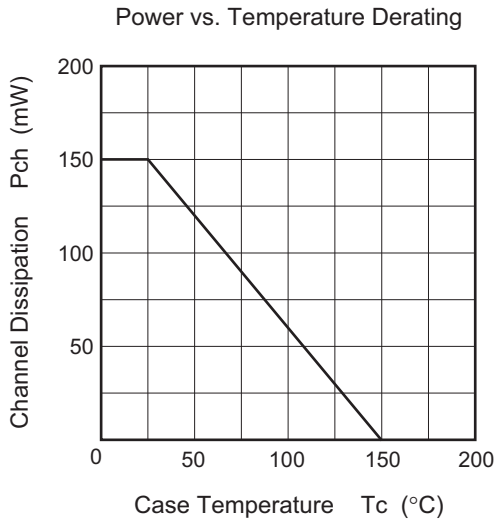
## Electrical Characteristics

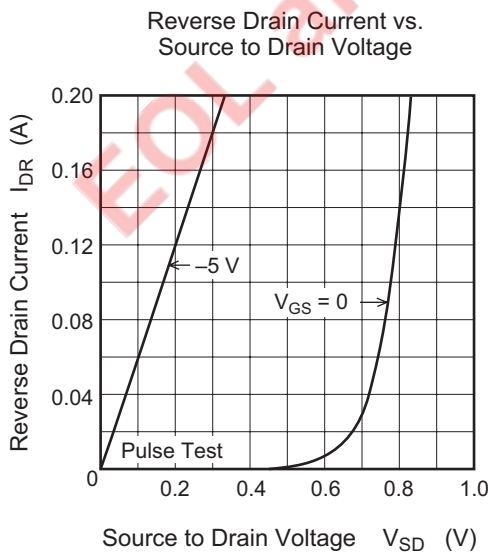
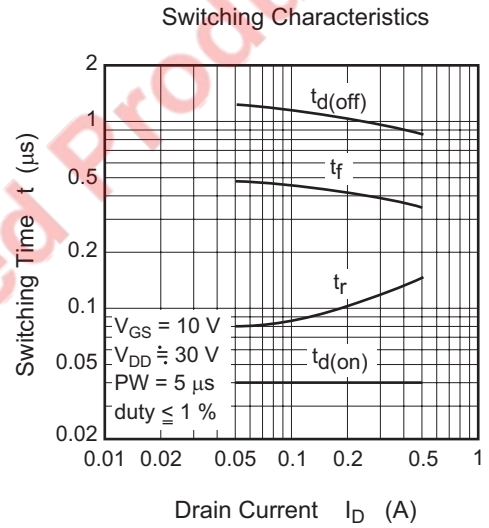
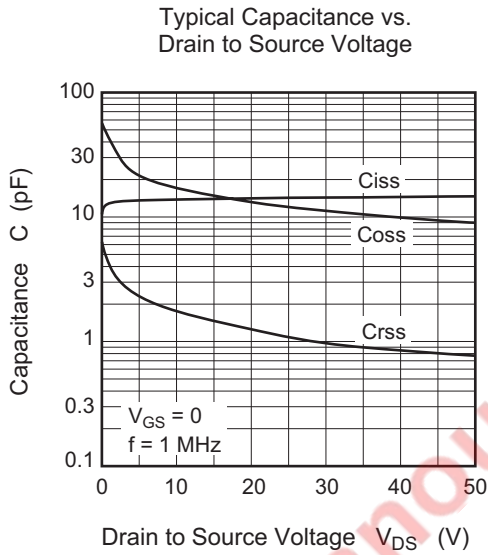
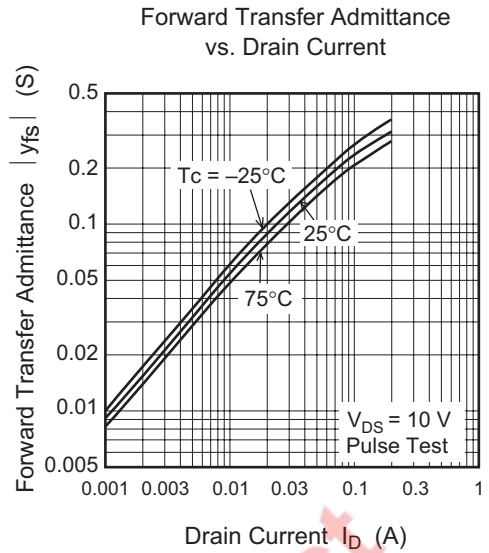
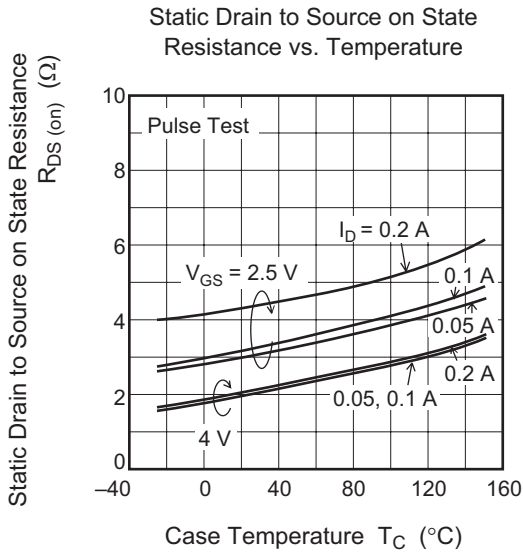
(Ta = 25°C)

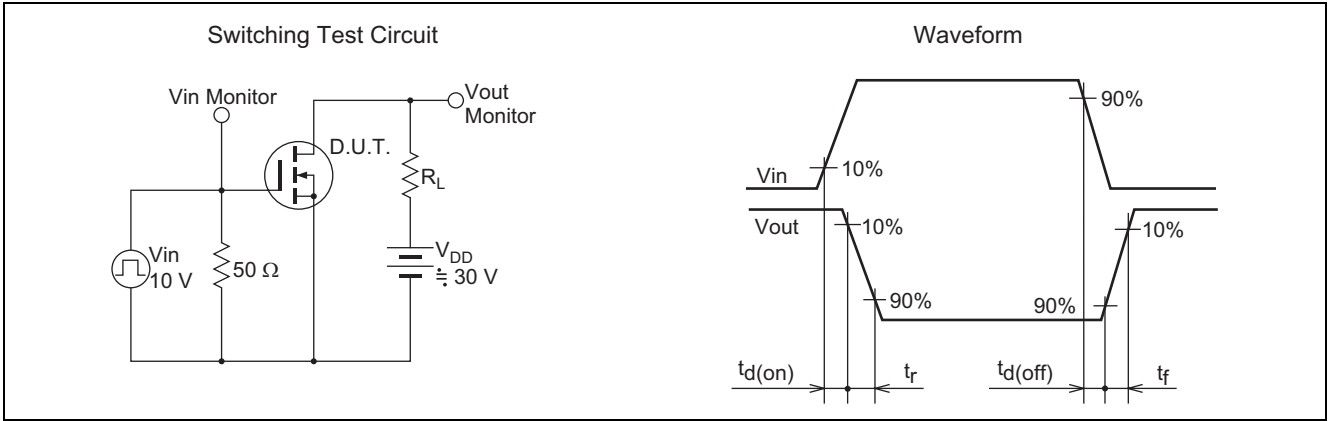
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	50	—	—	V	$I_D = 100 \mu A$ , $V_{GS} = 0$
Gate to source breakdown voltage	$V_{(BR)GSS}$	$\pm 20$	—	—	V	$I_G = \pm 100 \mu A$ , $V_{DS} = 0$
Zero gate voltage drain current	$I_{DSS}$	—	—	1.0	$\mu A$	$V_{DS} = 40 V$ , $V_{GS} = 0$
Gate to source leak current	$I_{GSS}$	—	—	$\pm 2.0$	$\mu A$	$V_{GS} = \pm 16 V$ , $V_{DS} = 0$
Gate to source cutoff voltage	$V_{GS(off)}$	0.5	—	1.5	V	$I_D = 10 \mu A$ , $V_{DS} = 5 V$
Static drain to source on state resistance	$R_{DS(on)1}$	—	2.0	2.6	$\Omega$	$I_D = 100 mA$ , $V_{GS} = 4 V^{*2}$
Static drain to source on state resistance	$R_{DS(on)2}$	—	3.1	5.0	$\Omega$	$I_D = 40 mA$ , $V_{GS} = 2.5 V^{*2}$
Forward transfer admittance	$ y_{fs} $	0.13	0.23	—	S	$I_D = 100 mA$ , $V_{DS} = 10 V$
Input capacitance	$C_{iss}$	—	14.0	—	pF	$V_{DS} = 10 V$ , $V_{GS} = 0$ , $f = 1 MHz$
Output capacitance	$C_{oss}$	—	17.2	—	pF	
Reverse transfer capacitance	$C_{rss}$	—	1.73	—	pF	
Turn-on delay time	$t_{d(on)}$	—	40	—	ns	$V_{GS} = 10 V$ , $I_D = 100 mA$ , $R_L = 300 \Omega$
Rise time	$t_r$	—	86	—	ns	
Turn-off delay time	$t_{d(off)}$	—	1120	—	ns	
Fall time	$t_f$	—	430	—	ns	

Note: 2. Pulse test

Main Characteristics

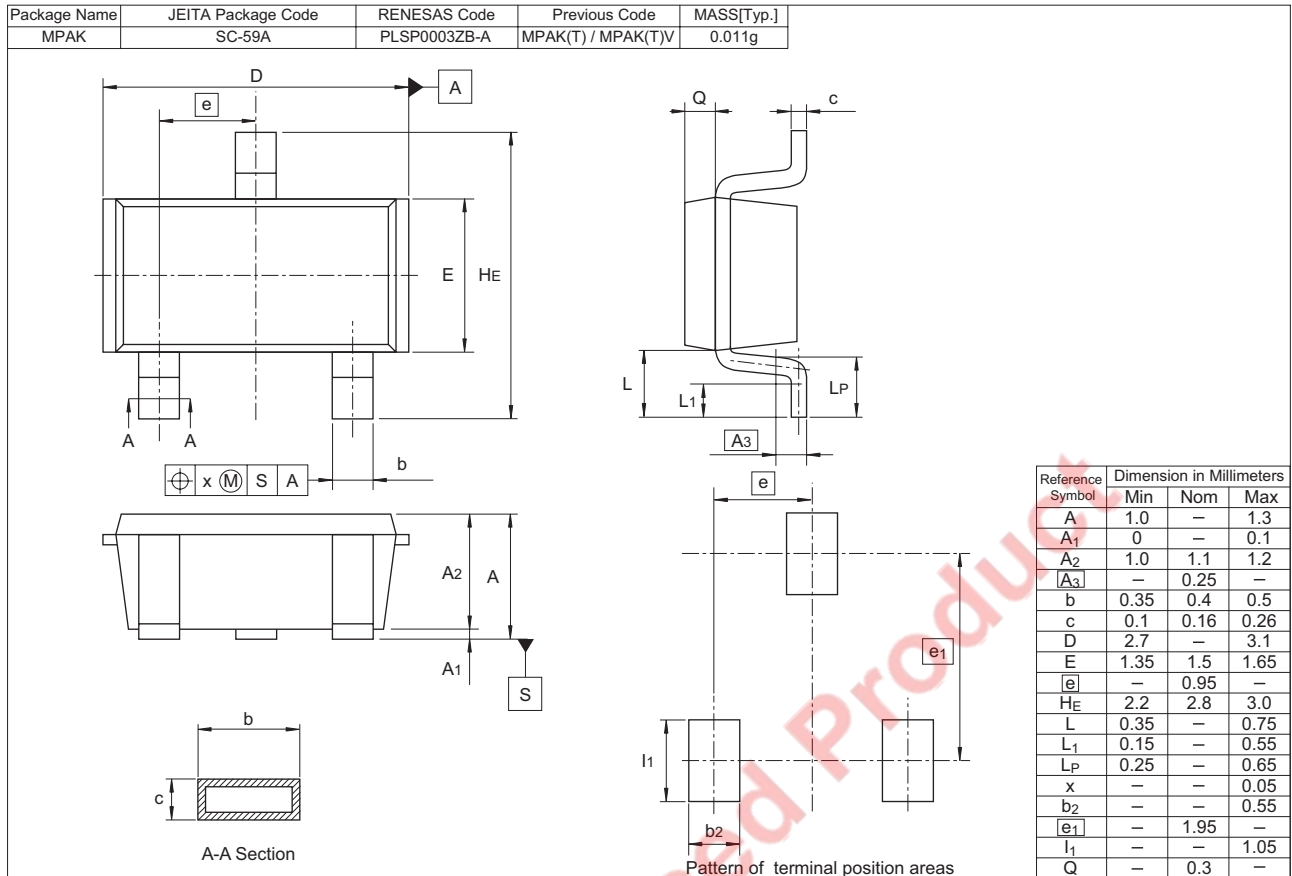






EOL announced Product

### Package Dimensions



### Ordering Information

Part Name	Quantity	Shipping Container
2SK2569ZN-TL-E	3000 pcs	Taping
2SK2569ZN-TR-E	3000 pcs	Taping

Note: For some grades, production may be terminated. Please contact the Renesas sales office to check the state of production before ordering the product.



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