

## 2SK2569

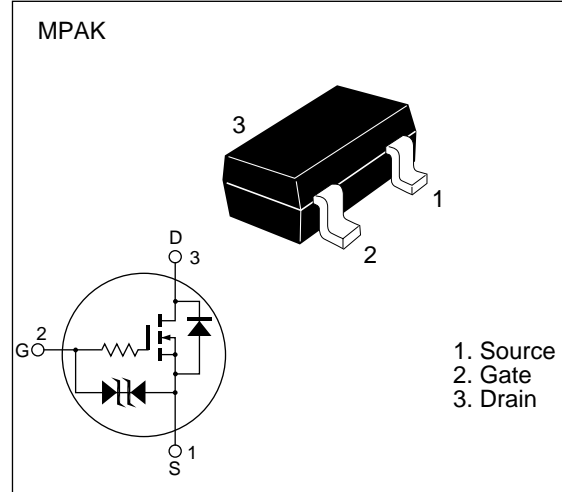
### Silicon N Channel MOS FET

#### Application

Low frequency power switching

#### Features

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



**Table 1 Absolute Maximum Ratings** ( $T_a = 25^\circ\text{C}$ )

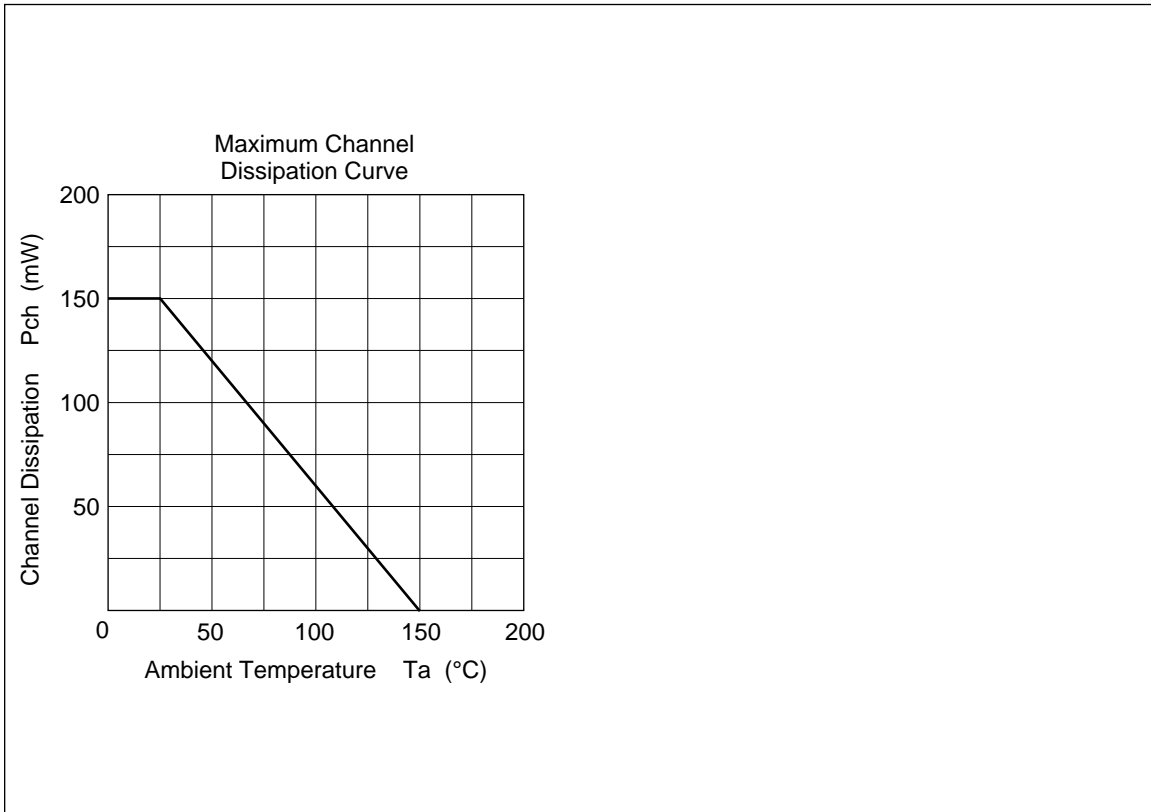
Item	Symbol	Ratings	Unit
Drain to source voltage	$V_{DSS}$	50	V
Gate to source voltage	$V_{GSS}$	$\pm 20$	V
Drain current	$I_D$	0.2	A
Drain peak current	$I_{D(pulse)}^*$	0.4	A
Channel dissipation	$P_{ch}^{**}$	150	mW
Channel temperature	$T_{ch}$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55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

\*  $PW \leq 10 \mu\text{s}$ , duty cycle  $\leq 1 \%$

**Table 2 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	$\Omega$	$I_D = -100 mA$ $V_{GS} = -4 V^*$
Static drain to source on state resistance	$R_{DS(on)2}$	—	3.1	5.0	$\Omega$	$I_D = 40 mA$ $V_{GS} = -2.5 V^*$
Foward transfer admittance	$ y_{fs} $	0.13	0.23	—	S	$I_D = 100 mA$ $V_{DS} = 10 V$
Input capacitance	$C_{iss}$	—	14.0	—	pF	$V_{DS} = 10 V$
Output capacitance	$C_{oss}$	—	17.2	—	pF	$V_{GS} = 0$
Reverse transfer capacitance	$C_{rss}$	—	1.73	—	pF	$f = 1 MHz$
Turn-on delay time	$t_{d(on)}$	—	40	—	$\mu s$	$V_{GS} = 10 V, I_D = 100 mA$
Rise time	$t_r$	—	86	—	$\mu s$	$R_L = 300 \Omega$
Turn-off delay tiem	$t_{d(off)}$	—	1120	—	$\mu s$	
Fall time	$t_f$	—	430	—	$\mu s$	

\* Pulse Test  
Marking is "ZN—"



## Package Dimensions

Unit : mm

