

# RJK1575DPA

150V - 25A - 场效应晶体管  
快速电源开关

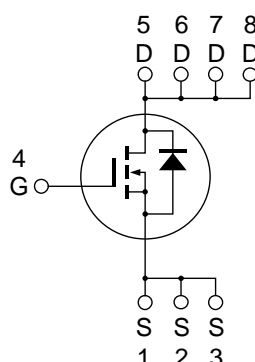
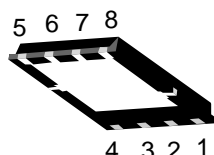
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## 特点

- 非常低的漏极/源极通态电阻  
 $R_{DS(on)} = 0.038 \Omega$  典型值 ( $I_D = 12.5 A$ ,  $V_{GS} = 10 V$ ,  $T_a = 25^\circ C$ )
- 低栅极充电电荷量  
 $Q_g = 37 nC$  典型值 ( $V_{DD} = 120 V$ ,  $V_{GS} = 10 V$ ,  $I_D = 25 A$ ,  $T_a = 25^\circ C$ )
- 低漏泄电流
- 快速开关时间

## 封装形式

RENESAS 封装代码: PWSN0008DE-A  
(封装名称: WPAK(3F))



1, 2, 3 源极  
4 栅极  
5, 6, 7, 8 漏极

## 绝对最大额定值

( $T_a = 25^\circ C$ )

参数	符号	额定值	单位
漏极/源极电压	$V_{DSS}$	150	V
栅极/源极电压	$V_{GSS}$	$\pm 30$	V
漏极电流	$I_D$ 注 4	25	A
脉冲漏极电流	$I_D$ (pulse) 注 1	50	A
体二极管反向漏极电流	$I_{DR}$	25	A
体二极管反向脉冲漏极电流	$I_{DR}$ (pulse) 注 1	50	A
雪崩电流	$I_{AP}$ 注 2	22	A
雪崩能量	$E_{AR}$ 注 2	36.3	mJ
沟道最大容许损耗	$P_{ch}$ 注 3	30	W
沟道-外壳间热阻	$\theta_{ch-c}$	4.17	$^\circ C/W$
沟道温度	$T_{ch}$	150	$^\circ C$
储存温度	$T_{stg}$	-55 to +150	$^\circ C$

- 注:
1. 在  $PW \leq 10 \mu s$ , 工作周期  $\leq 1\%$  的容许值
  2.  $ST_{ch} = 25^\circ C$ ,  $T_{ch} \leq 150^\circ C$
  3. 在  $T_c = 25^\circ C$  的容许值
  4. 限于最大安全工作区域

## 电特性

(Ta = 25°C)

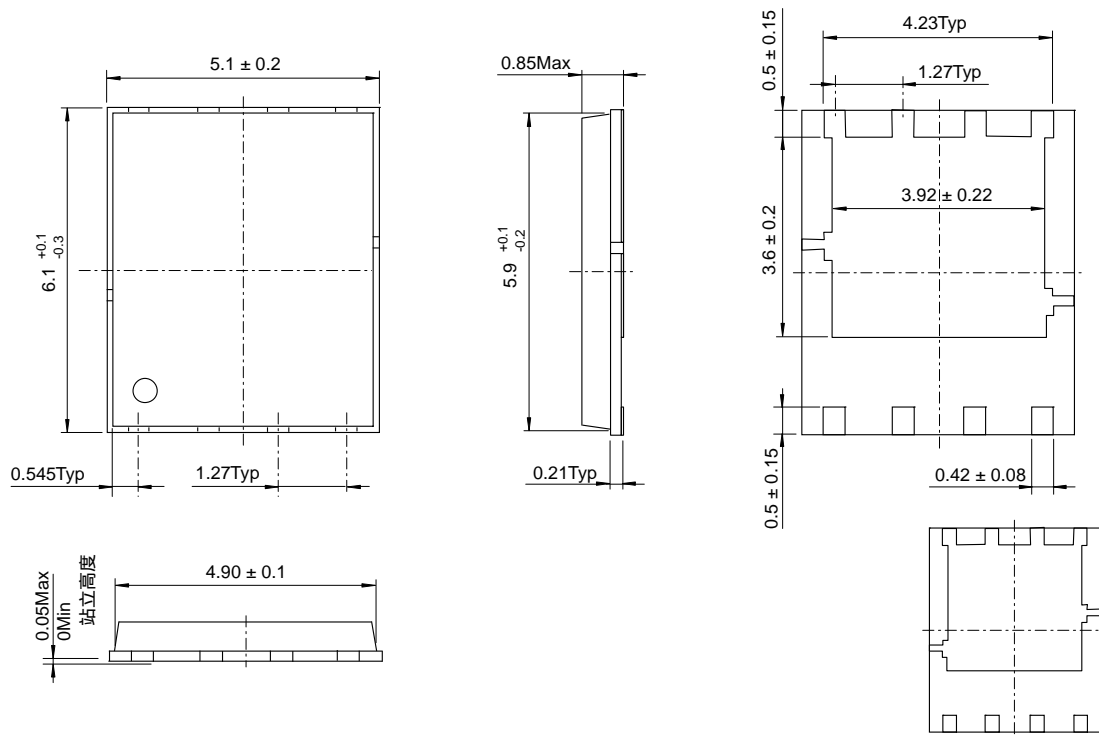
参数	符号	最小值	典型值	最大值	单位	测定条件
漏极/源极破坏电压	$V_{(BR)DSS}$	150	—	—	V	$I_D = 10 \text{ mA}$ , $V_{GS} = 0$
漏极截止电流	$I_{DSS}$	—	—	1	$\mu\text{A}$	$V_{DS} = 150 \text{ V}$ , $V_{GS} = 0$
栅极截止电流	$I_{GSS}$	—	—	$\pm 1$	$\mu\text{A}$	$V_{GS} = \pm 30 \text{ V}$ , $V_{DS} = 0$
栅极/源极截止电压	$V_{GS(off)}$	2.5	—	4.5	V	$V_{DS} = 10 \text{ V}$ , $I_D = 1 \text{ mA}$
静态漏极/源极通态电阻	$R_{DS(on)}$	—	0.038	0.048	$\Omega$	$I_D = 12.5 \text{ A}$ , $V_{GS} = 10 \text{ V}$ <sup>注5</sup>
输入电容	$C_{iss}$	—	2200	—	pF	$V_{DS} = 25 \text{ V}$ $V_{GS} = 0$ $f = 1 \text{ MHz}$
输出电容	$C_{oss}$	—	240	—	pF	
反向传输电容	$C_{rss}$	—	88	—	pF	
接通延迟时间	$t_{d(on)}$	—	32	—	ns	$I_D = 12.5 \text{ A}$ $V_{GS} = 10 \text{ V}$ $R_L = 6 \Omega$ $R_g = 10 \Omega$
上升时间	$t_r$	—	30	—	ns	
关断延迟时间	$t_{d(off)}$	—	57	—	ns	
下降时间	$t_f$	—	22	—	ns	
栅极充电电荷量	$Q_g$	—	37	—	nC	$V_{DD} = 120 \text{ V}$ $V_{GS} = 10 \text{ V}$ $I_D = 25 \text{ A}$
栅极/源极充电电荷量	$Q_{gs}$	—	12	—	nC	
栅极/漏极充电电荷量	$Q_{gd}$	—	13	—	nC	
体二极管正向电压	$V_{DF}$	—	0.81	1.45	V	$I_F = 25 \text{ A}$ , $V_{GS} = 0$ <sup>注5</sup>
体二极管反向恢复时间	$t_{rr}$	—	85	—	ns	$I_F = 25 \text{ A}$ , $V_{GS} = 0$ $di_F/dt = 100 \text{ A}/\mu\text{s}$

注: 5. 脉冲测试

## 封装尺寸

封装名称	JEITA 封装代码	RENESAS 代码	旧代码	重量[典型]
WPAK(3F)	-	PWSN0008DE-A	WPAK(3F)V	0.075g

单位: mm



注: 上图所示芯片垫板的引脚支撑是存在的。

## 订购信息

订购型号	数量	运输包装
RJK1575DPA-00#J5A	3000 枚	带卷包装

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Tel: +44-1628-651-700, Fax: +44-1628-651-804

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Arcadiastrasse 10, 40472 Düsseldorf, Germany  
Tel: +49-211-65030, Fax: +49-211-6503-1327

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Tel: +86-10-8235-1155, Fax: +86-10-8235-7679

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Tel: +86-21-5877-1818, Fax: +86-21-5887-7858 / -7898

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**Renesas Electronics Korea Co., Ltd.**  
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