

RJL6018DPK

600V - 27A - 场效应晶体管
快速电源开关

R07DS0816CJ0200

修订版本 2.00

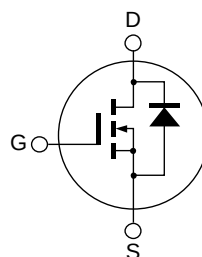
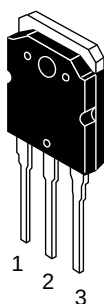
Oct 01, 2012

特点

- 内置快速恢复二极管
- 低漏极/源极通态电阻
 $R_{DS(on)} = 0.22 \Omega$ 典型值 ($I_D = 13.5 \text{ A}$, $V_{GS} = 10 \text{ V}$, $T_a = 25^\circ\text{C}$)
- 低漏泄电流
- 快速开关时间

封装形式

RENESAS 封装代码: PRSS0004ZE-A
(封装名称:TO-3P)



1. 栅极
2. 漏极 (凸缘)
3. 源极

绝对最大额定值

($T_a = 25^\circ\text{C}$)

参数	符号	额定值	单位
漏极/源极电压	V_{DSS}	600	V
栅极/源极电压	V_{GSS}	± 30	V
漏极电流	I_D	27	A
脉冲漏极电流	$I_{D(pulse)}$ 注 1	81	A
体二极管反向漏极电流	I_{DR}	27	A
体二极管反向脉冲漏极电流	$I_{DR(pulse)}$ 注 1	81	A
雪崩电流	I_{AP} 注 3	6	A
雪崩能量	E_{AR} 注 3	1.9	mJ
沟道最大容许损耗	P_{ch} 注 2	200	W
沟道-外壳间热阻	θ_{ch-c}	0.625	$^\circ\text{C/W}$
沟道温度	T_{ch}	150	$^\circ\text{C}$
储存温度	T_{stg}	-55 to +150	$^\circ\text{C}$

- 注:
1. 在 $PW \leq 10 \mu\text{s}$, 工作周期 $\leq 1\%$ 的容许值
 2. 在 $T_c = 25^\circ\text{C}$ 的容许值
 3. $STch = 25^\circ\text{C}$, $T_{ch} \leq 150^\circ\text{C}$

电特性

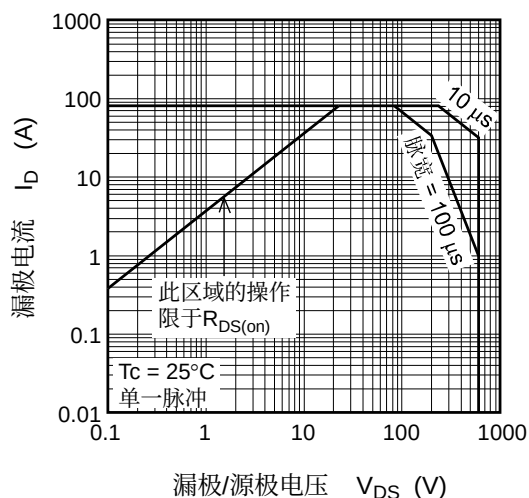
(Ta = 25°C)

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	$V_{(BR)DSS}$	600	—	—	V	$I_D = 10 \text{ mA}$, $V_{GS} = 0$
漏极截止电流	I_{DSS}	—	—	10	μA	$V_{DS} = 600 \text{ V}$, $V_{GS} = 0$
栅极截止电流	I_{GSS}	—	—	± 0.1	μA	$V_{GS} = \pm 30 \text{ V}$, $V_{DS} = 0$
栅极/源极截止电压	$V_{GS(off)}$	1.5	—	4.0	V	$V_{DS} = 10 \text{ V}$, $I_D = 1 \text{ mA}$
静态漏极/源极通态电阻	$R_{DS(on)}$	—	0.220	0.265	Ω	$I_D = 13.5 \text{ A}$, $V_{GS} = 10 \text{ V}$ ^{注4}
输入电容	C_{iss}	—	3830	—	pF	$V_{DS} = 25 \text{ V}$ $V_{GS} = 0$ $f = 1 \text{ MHz}$
输出电容	C_{oss}	—	369	—	pF	
反向传输电容	C_{rss}	—	43	—	pF	
接通延迟时间	$t_{d(on)}$	—	42	—	ns	$I_D = 13.5 \text{ A}$ $V_{GS} = 10 \text{ V}$ $R_L = 22.2 \Omega$ $R_g = 10 \Omega$
上升时间	t_r	—	53	—	ns	
关断延迟时间	$t_{d(off)}$	—	157	—	ns	
下降时间	t_f	—	87	—	ns	
栅极充电电荷量	Q_g	—	98	—	nC	$V_{DD} = 480 \text{ V}$ $V_{GS} = 10 \text{ V}$ $I_D = 27 \text{ A}$
栅极/源极充电电荷量	Q_{gs}	—	17.5	—	nC	
栅极/漏极充电电荷量	Q_{gd}	—	41.6	—	nC	
体二极管正向电压	V_{DF}	—	1.00	1.65	V	$I_F = 27 \text{ A}$, $V_{GS} = 0$ ^{注4}
体二极管反向恢复时间	t_{rr}	—	180	—	ns	$I_F = 27 \text{ A}$, $V_{GS} = 0$ $di_F/dt = 100 \text{ A}/\mu\text{s}$

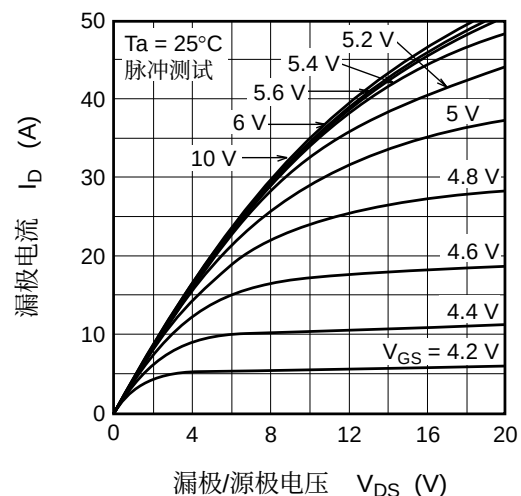
注: 4. 脉冲测试

主要特性

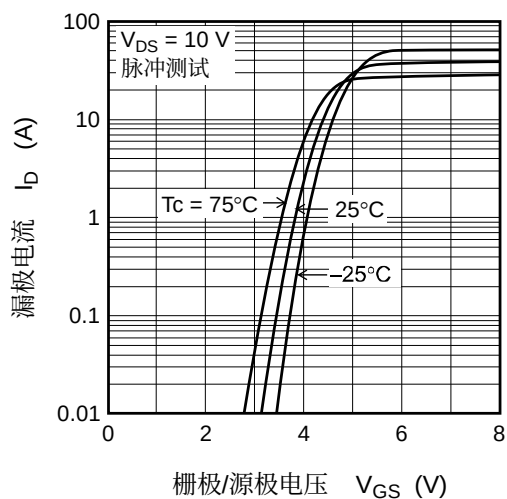
最大安全工作区域



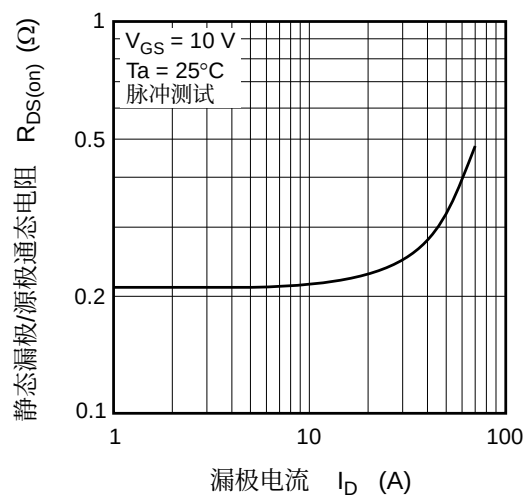
典型输出特性



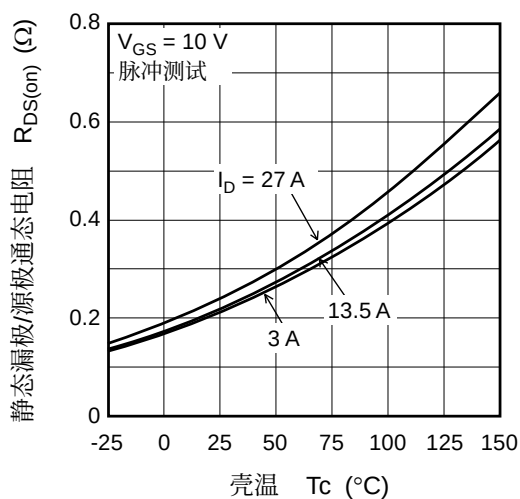
典型传输特性



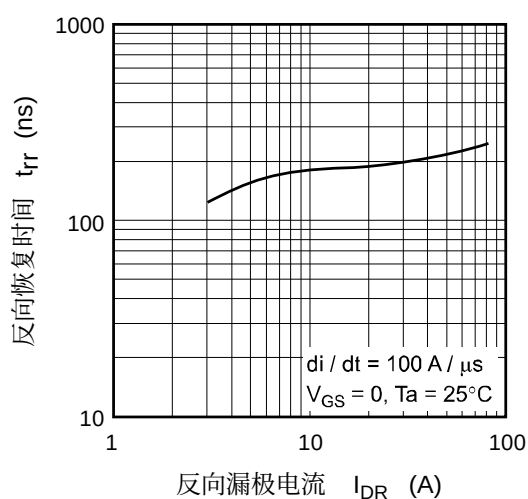
静态漏极/源极通态电阻-漏极电流 (典型)



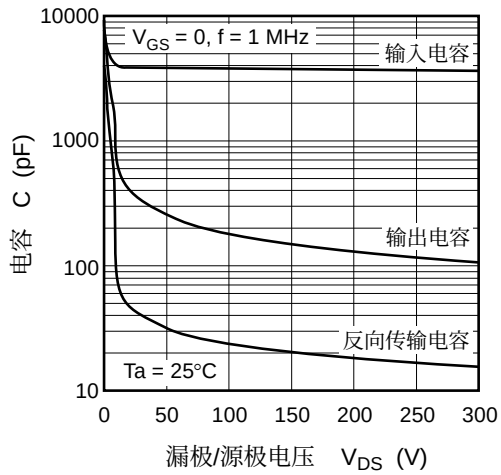
静态漏极/源极通态电阻-亮温 (典型)



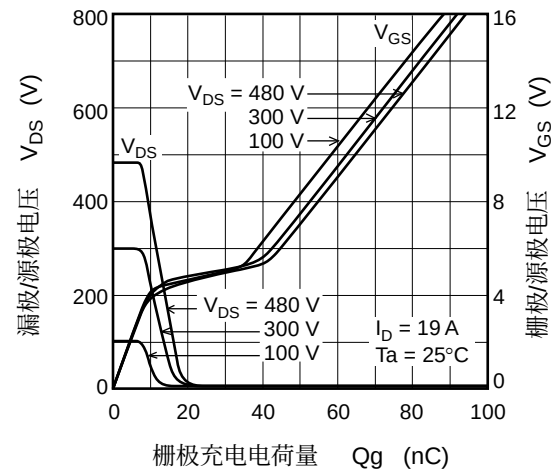
体二极管反向恢复时间 (典型)



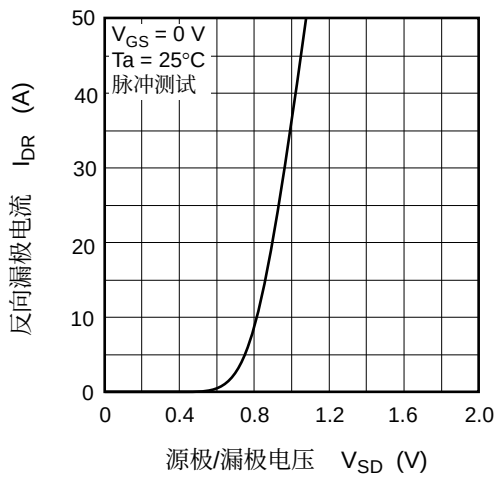
典型电容-漏极/源极电压



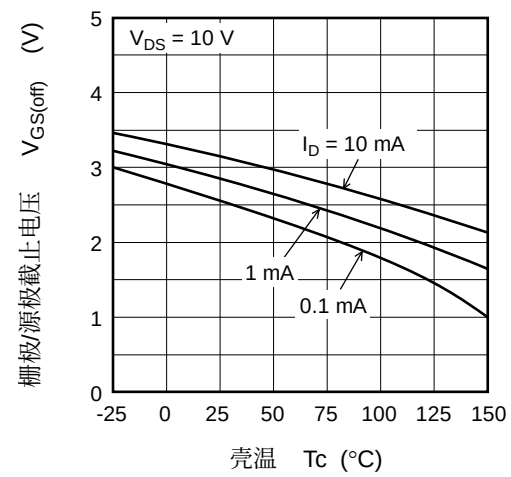
输入时序特性 (典型)



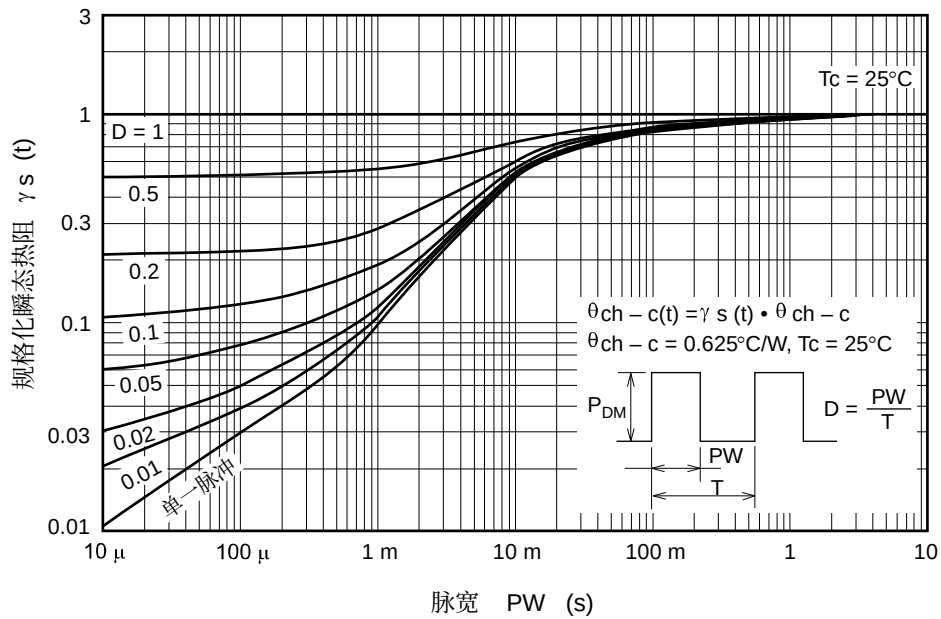
反向漏极电流-源极/漏极电压 (典型)



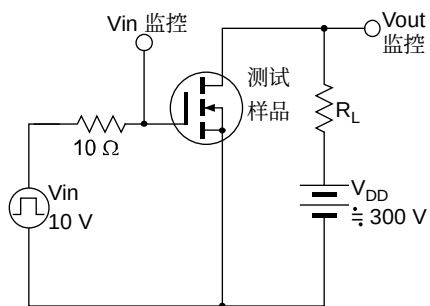
栅极/源极截止电压-壳温 (典型)



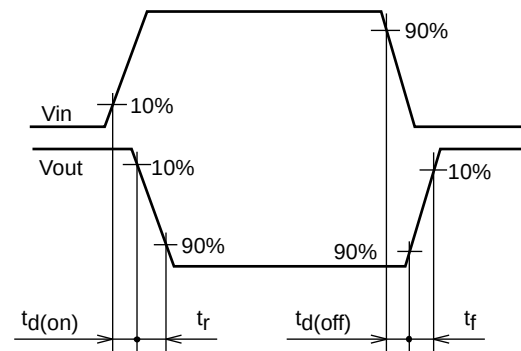
瞬态热阻特性规格化



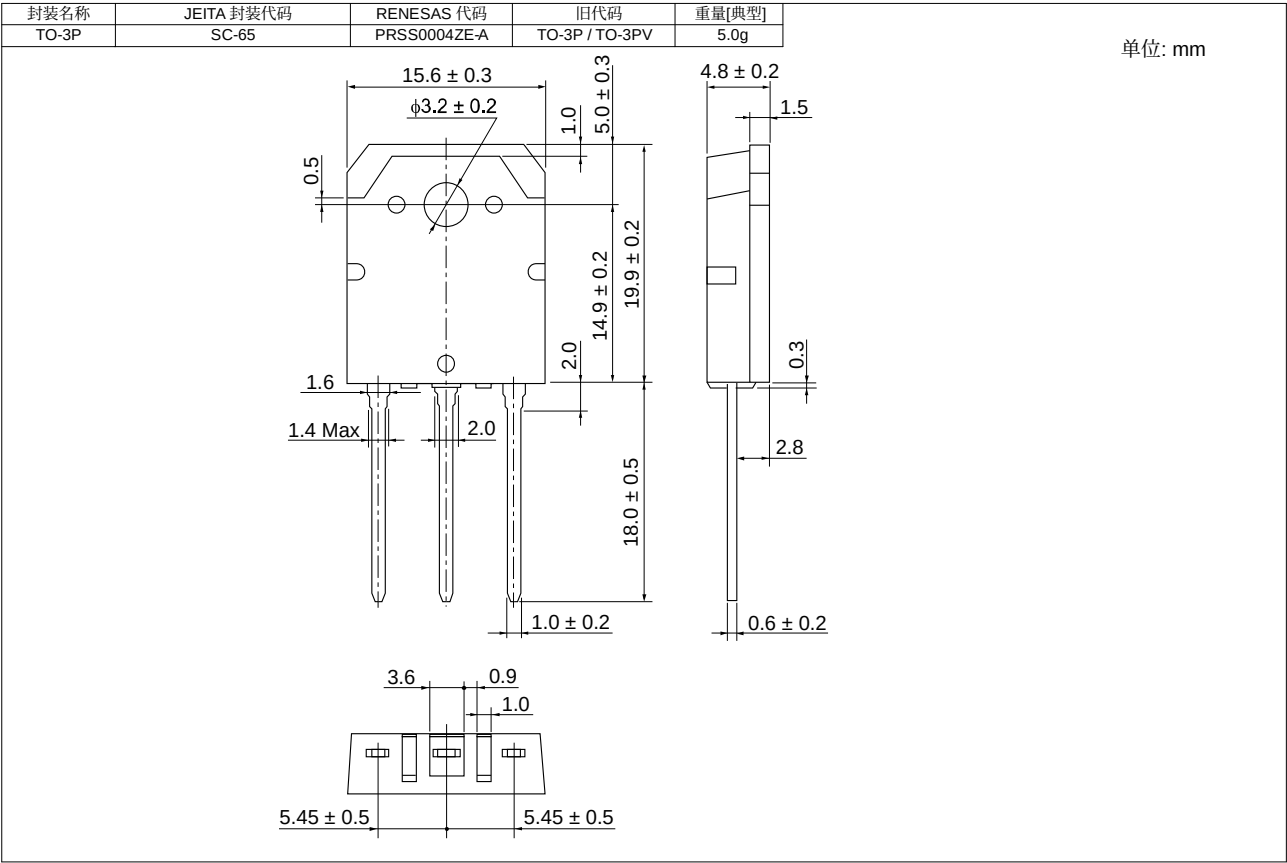
开关时间测定电路



波形



封装尺寸



订购信息

订购型号	数量	运输包装
RJL6018DPK-00#T0	360 枚	纸盒包装（管状容器）

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2880 Scott Boulevard Santa Clara, CA 95050-2554, U.S.A.
Tel: +1-408-588-6000, Fax: +1-408-588-6130

Renesas Electronics Canada Limited
1101 Nicholson Road, Newmarket, Ontario L3Y 9C3, Canada
Tel: +1-905-898-5441, Fax: +1-905-898-3220

Renesas Electronics Europe Limited
Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K
Tel: +44-1628-651-700, Fax: +44-1628-651-804

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

Renesas Electronics (China) Co., Ltd.
7th Floor, Quantum Plaza, No.27 ZhichunLu Haidian District, Beijing 100083, P.R.China
Tel: +86-10-8235-1155, Fax: +86-10-8235-7679

Renesas Electronics (Shanghai) Co., Ltd.
Unit 204, 205, AZIA Center, No.1233 Lujiazui Ring Rd., Pudong District, Shanghai 200120, China
Tel: +86-21-5877-1818, Fax: +86-21-5887-7858 / -7898

Renesas Electronics Hong Kong Limited
Unit 1601-1613, 16/F., Tower 2, Grand Century Place, 193 Prince Edward Road West, Mongkok, Kowloon, Hong Kong
Tel: +852-2886-9318, Fax: +852-2886-9022/9044

Renesas Electronics Taiwan Co., Ltd.
13F, No. 363, Fu Shing North Road, Taipei, Taiwan
Tel: +886-2-8175-9800, Fax: +886-2-8175-9870

Renesas Electronics Singapore Pte. Ltd.
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Tel: +65-6213-0200, Fax: +65-6213-0300

Renesas Electronics Malaysia Sdn.Bhd.
Unit 906, Block B, Menara Amcorp, Amcorp Trade Centre, No. 18, Jin Persiaran Barat, 46050 Petaling Jaya, Selangor Darul Ehsan, Malaysia
Tel: +60-3-7955-9390, Fax: +60-3-7955-9510

Renesas Electronics Korea Co., Ltd.
11F., Samik Lawied'or Bldg., 720-2 Yeoksam-Dong, Kangnam-Ku, Seoul 135-080, Korea
Tel: +82-2-558-3737, Fax: +82-2-558-5141