

RJH1DF7RDPQ-80

硅 N 沟道绝缘栅双极晶体管
快速电源开关

R07DS0413CJ0100

修订版本 1.00

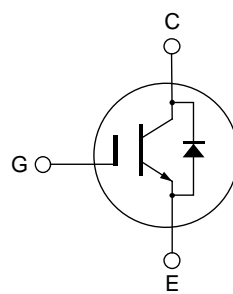
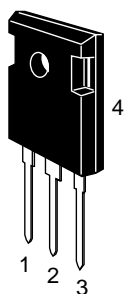
Oct 18, 2011

特点

- 电压谐振电路用途
- 逆导绝缘栅双极晶体管与单片体二极管
- 用于感应加热的高效率产品
- 低集电极/发射极饱和电压
 $V_{CE(sat)} = 1.95 \text{ V}$ 典型值 ($I_C = 35 \text{ A}$, $V_{GE} = 15 \text{ V}$, $T_j = 25^\circ\text{C}$)
- 栅极/发射极额定电压 $\pm 30 \text{ V}$
- 无铅电镀引脚

封装形式

RENESAS 封装代码: PRSS0003ZE-A
(封装名称: TO-247)



1. 栅极
2. 集电极
3. 发射极
4. 集电极

绝对最大额定值

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

参数		符号	额定值	单位
集电极/发射极电压		V_{CES}	1350	V
栅极/发射极电压		V_{GES}	± 30	V
集电极电流	$T_c = 25^\circ\text{C}$	I_C	60	A
	$T_c = 100^\circ\text{C}$	I_C	35	A
集电极脉冲电流		$i_{c(peak)}$ 注1	100	A
集电极/发射极二极管正向电流		i_{DF}	25	A
集电极最大允许功率损耗		P_C	250	W
结壳热阻		θ_{j-c}	0.5	$^\circ\text{C/W}$
结温		T_j	150	$^\circ\text{C}$
储存温度		T_{stg}	-55 to +150	$^\circ\text{C}$

注: 1. 脉冲宽度限于安全工作区域。

电特性

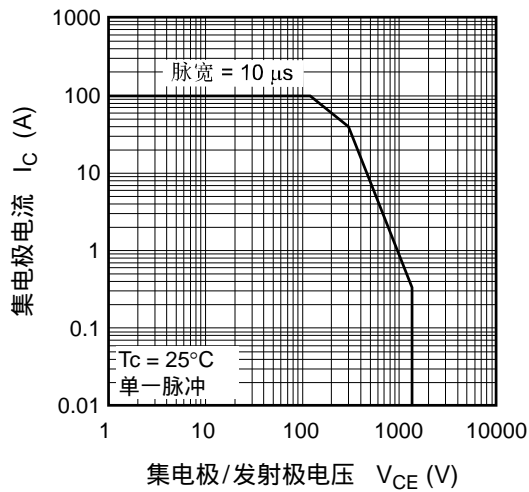
(T_j = 25°C)

参数	符号	最小值	典型值	最大值	单位	测定条件
集电极/发射极断路电流	I _{CES}	—	—	100	μA	V _{CE} = 1350 V, V _{GE} = 0
栅极/发射极漏泄电流	I _{GES}	—	—	±1	μA	V _{GE} = ±30 V, V _{CE} = 0
栅极/发射极截止电压	V _{GE(off)}	3.5	—	7.0	V	V _{CE} = 10 V, I _C = 1 mA
集电极/发射极饱和电压	V _{CE(sat)}	—	1.95	2.55	V	I _C = 35 A, V _{GE} = 15 V ^{注2}
输入电容	C _{ies}	—	3330	—	pF	V _{CE} = 25 V V _{GE} = 0 V f = 1 MHz
输出电容	C _{oes}	—	62	—	pF	
反向传输电容	C _{res}	—	50	—	pF	
接通延迟时间	t _{d(on)}	—	58	—	ns	I _C = 35 A V _{CE} = 600 V, V _{GE} = 15 V R _g = 5 Ω ^{注2} 电阻负载
上升时间	t _r	—	78	—	ns	
关断延迟时间	t _{d(off)}	—	144	—	ns	
下降时间	t _f	—	208	—	ns	
集电极/发射极二极管正向电压	V _F	—	3.4	4.4	V	I _F = 10 A ^{注2}

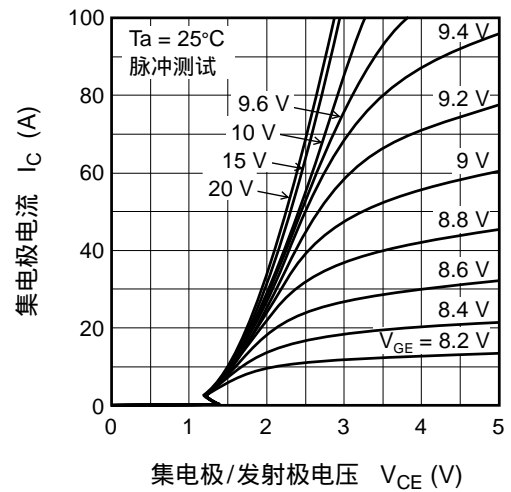
注: 2. 脉冲测试

主要特性

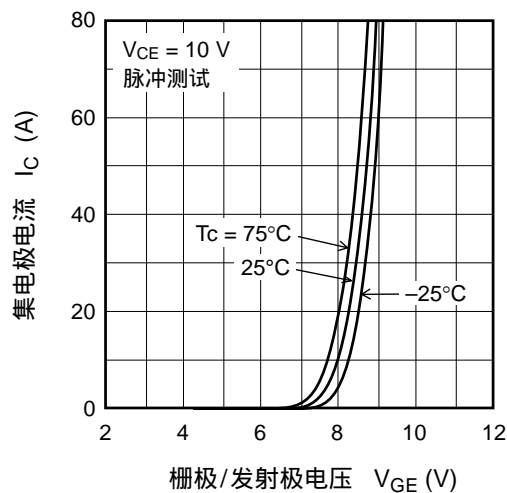
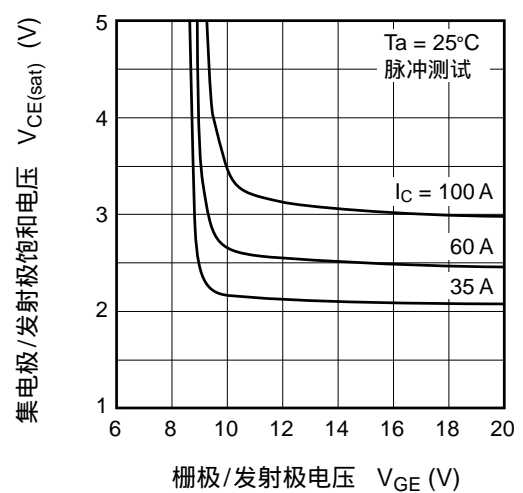
最大安全工作区域



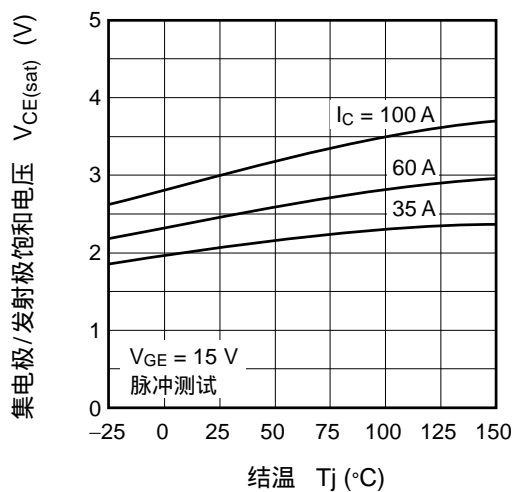
典型输出特性



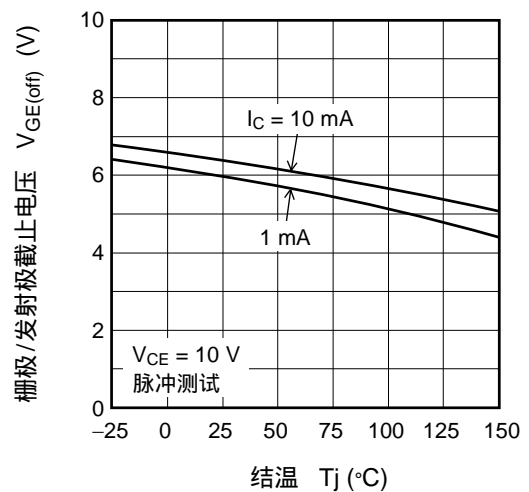
典型传输特性


集电极/发射极饱和电压-
栅极/发射极电压 (典型)


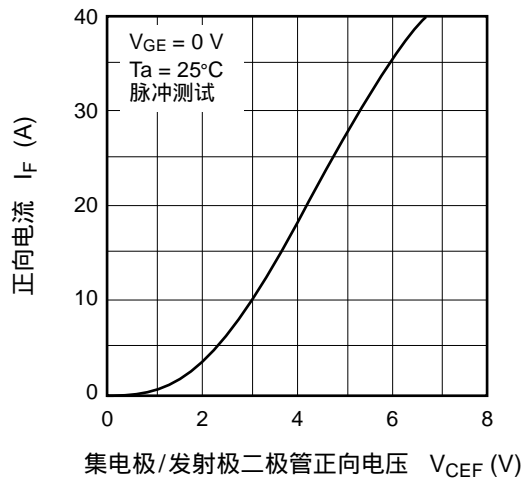
集电极/发射极饱和电压-结温 (典型)



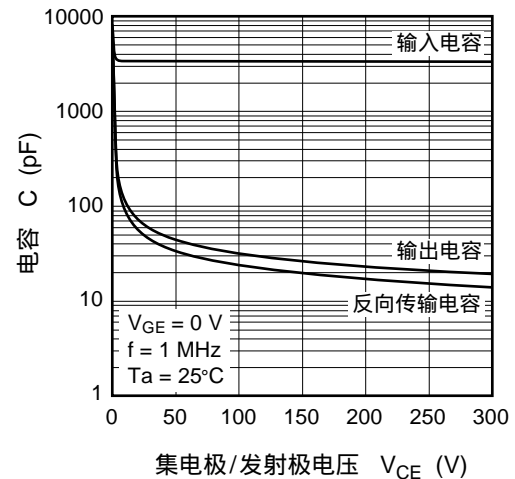
栅极/发射极截止电压-结温 (典型)



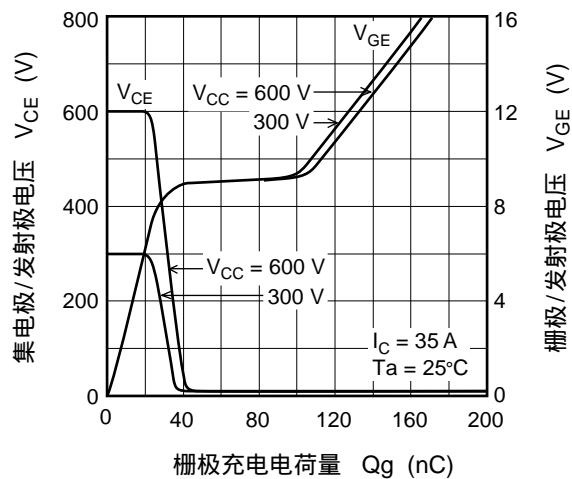
正向电流-正向电压 (典型)



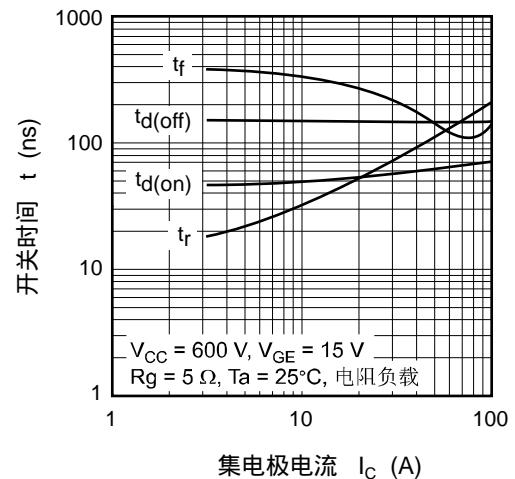
典型电容-集电极/发射极电压



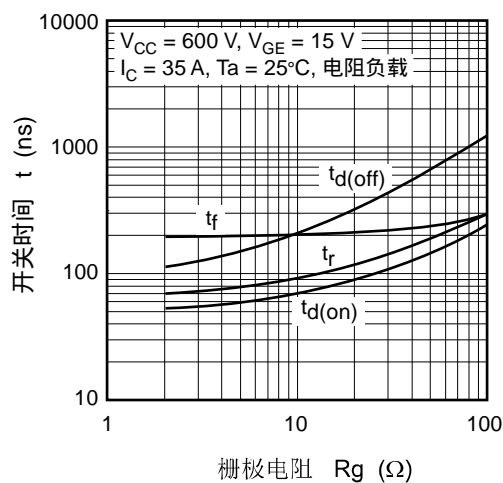
输入时序特性 (典型)



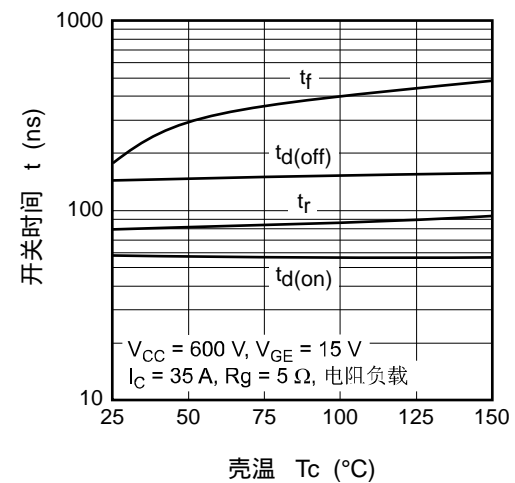
开关特性 (典型) (1)



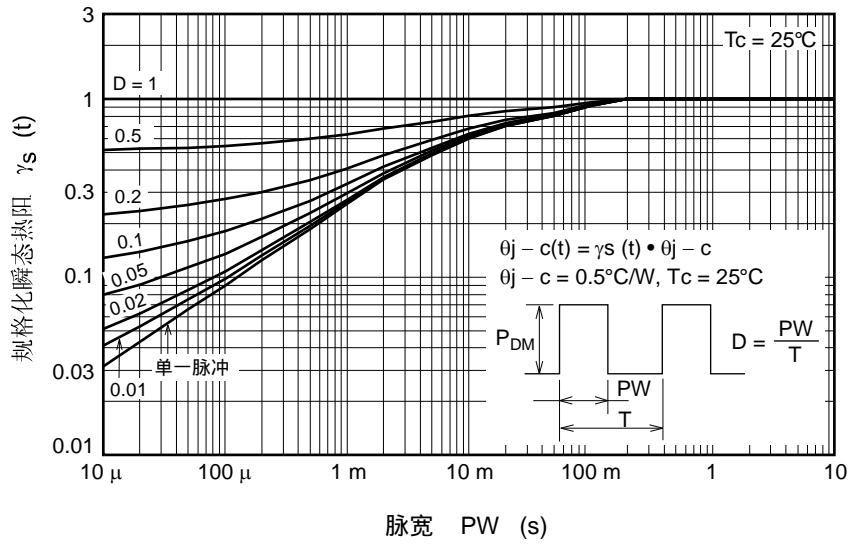
开关特性 (典型) (2)



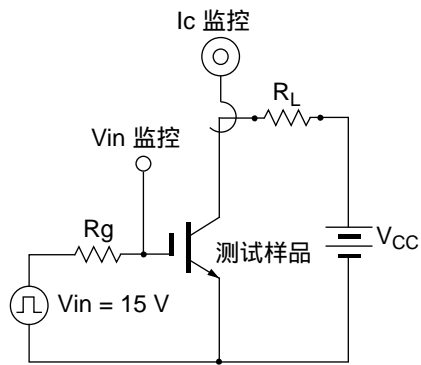
开关特性 (典型) (3)



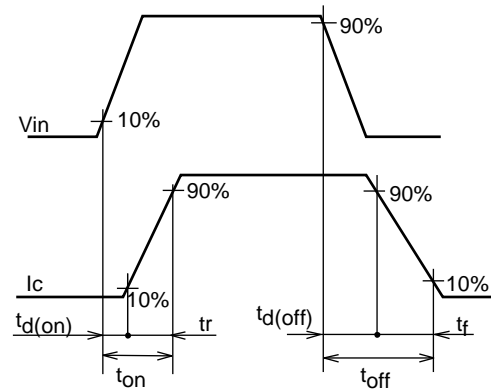
瞬态热阻特性规格化-脉宽



开关时间测定电路



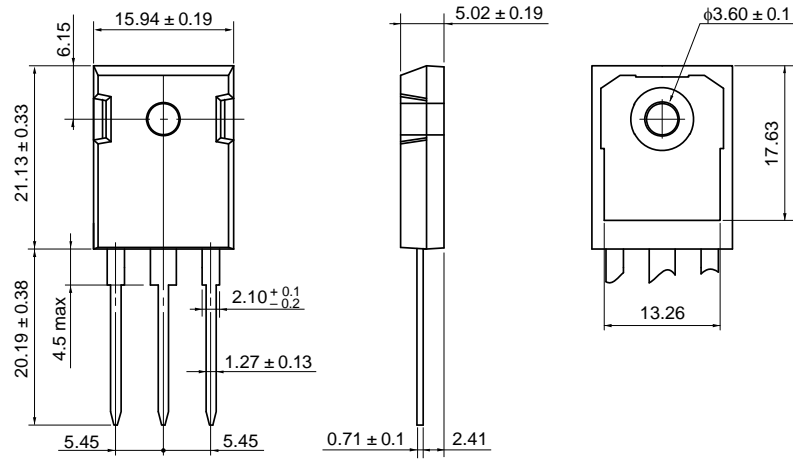
运行波形



封装尺寸

封装名称	JEITA 封装代码	RENESAS 代码	旧代码	重量[典型]
TO-247	—	PRSS0003ZE-A	—	6.0g

单位: mm



订购信息

订购型号	数量	运输包装
RJH1DF7RDPQ-80-T2	450 枚	纸盒包装 (管状容器)

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Renesas Electronics America Inc.
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: +44-1628-585-100, Fax: +44-1628-585-900

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: +86-21-6887-7858 / -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: +886-2-8175-9600, Fax: +886 2-8175-9670

Renesas Electronics Singapore Pte. Ltd.
1 harbourFront Avenue, #06-10, Keppel Bay Tower, Singapore 098632
Tel: +65-6213-0200, Fax: +65-6278-8001

Renesas Electronics Malaysia Sdn.Bhd.
Unit 906, Block B, Menara Amcorp, Amcorp Trade Centre, No. 18, Jln 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 Lavied' or Bldg., 720-2 Yeoksam-Dong, Kangnam-Ku, Seoul 135-080, Korea
Tel: +82-2-558-3737, Fax: +82-2-558-5141