

# RJH1CF5RDPQ-80

## 硅 N 沟道绝缘栅双极晶体管 快速电源开关

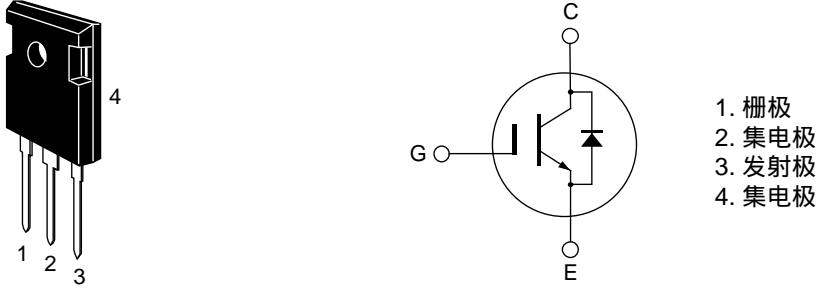
R07DS0355CJ0100  
修订版本 1.00  
Dec 05, 2011

### 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 ( $I_C = 25 \text{ A}$ ,  $V_{GE} = 15 \text{ V}$ ,  $T_j = 25^\circ\text{C}$ )
- 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	$V_{CES}$	1200	V	
栅极/发射极电压	$V_{GES}$	$\pm 30$	V	
集电极电流	$T_c = 25^\circ\text{C}$	$I_C$	50	A
	$T_c = 100^\circ\text{C}$	$I_C$	25	A
集电极脉冲电流	$i_{c(\text{peak})}$ <sup>注1</sup>	100	A	
集电极/发射极二极管正向电流	$i_{DF}$	16	A	
集电极最大允许功率损耗	$P_C$	192.3	W	
结壳热阻	$\theta_{j-c}$	0.65	$^\circ\text{C/W}$	
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

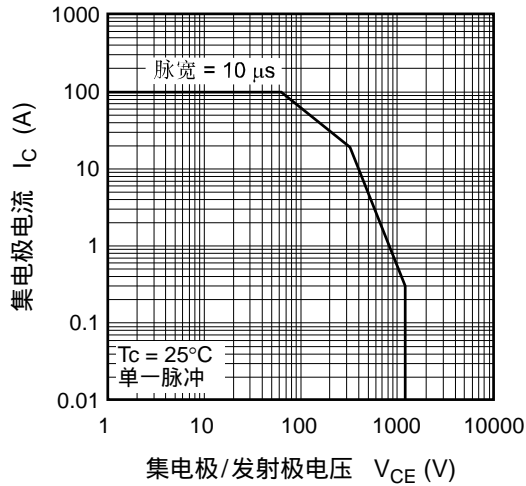
(T<sub>j</sub> = 25°C)

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 <sub>CES</sub>	—	—	100	μA	V <sub>CE</sub> = 1200 V, V <sub>GE</sub> = 0
栅极/发射极漏泄电流	I <sub>GES</sub>	—	—	±0.1	μA	V <sub>GE</sub> = ±30 V, V <sub>CE</sub> = 0
栅极/发射极截止电压	V <sub>GE(off)</sub>	3.5	5.0	7.0	V	V <sub>CE</sub> = 10V, I <sub>C</sub> = 1 mA
集电极/发射极饱和电压	V <sub>CE(sat)</sub>	—	1.95	2.4	V	I <sub>C</sub> = 25 A, V <sub>GE</sub> = 15V <sup>注2</sup>
		—	2.4	—	V	I <sub>C</sub> = 50 A, V <sub>GE</sub> = 15V <sup>注2</sup>
输入电容	C <sub>ies</sub>	—	1765	—	pF	V <sub>CE</sub> = 25 V
输出电容	C <sub>oes</sub>	—	36	—	pF	V <sub>GE</sub> = 0 V
反向传输电容	C <sub>res</sub>	—	28	—	pF	f = 1 MHz
接通延迟时间	t <sub>d(on)</sub>	—	45	—	ns	I <sub>C</sub> = 25 A
上升时间	t <sub>r</sub>	—	57	—	ns	V <sub>CE</sub> = 600 V, V <sub>GE</sub> = 15 V
关断延迟时间	t <sub>d(off)</sub>	—	110	—	ns	R <sub>g</sub> = 5 Ω <sup>注2</sup>
下降时间	t <sub>f</sub>	—	272	—	ns	电阻负载
集电极/发射极二极管正向电压	V <sub>F</sub>	—	4.2	5.4	V	I <sub>F</sub> = 10 A <sup>注2</sup>

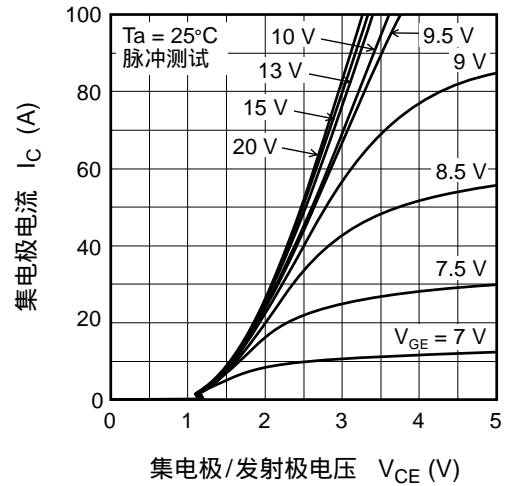
注: 2. 脉冲测试

主要特性

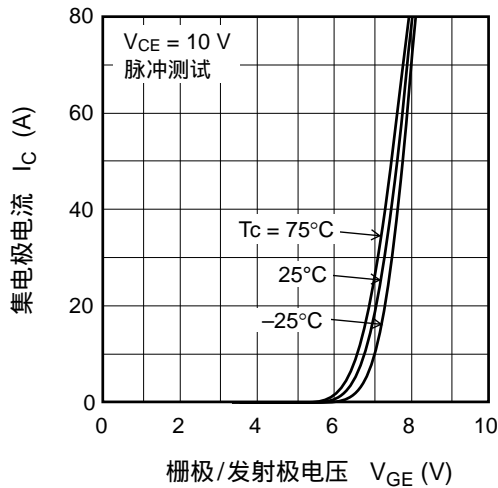
最大安全工作区域



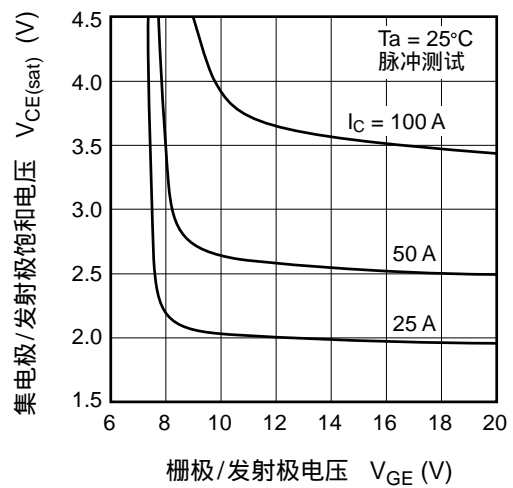
典型输出特性



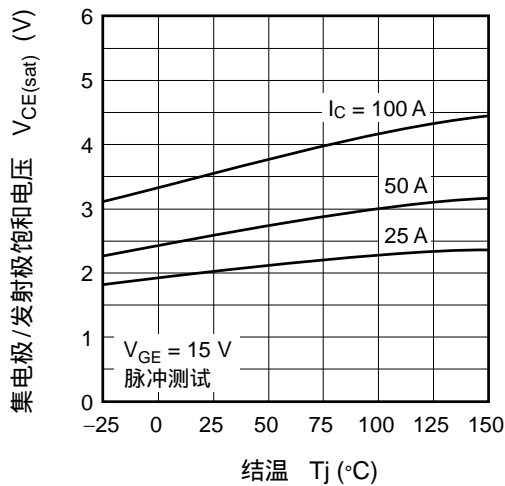
典型传输特性



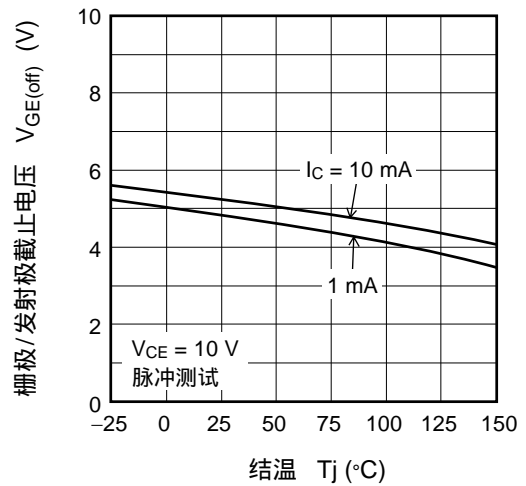
集电极/发射极饱和电压-栅极/发射极电压 (典型)



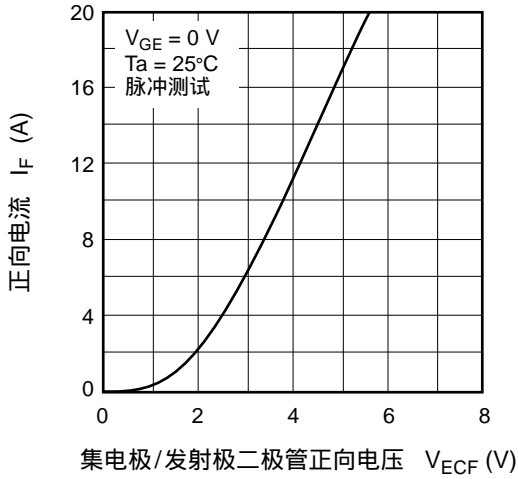
栅极/发射极电压-结温 (典型)



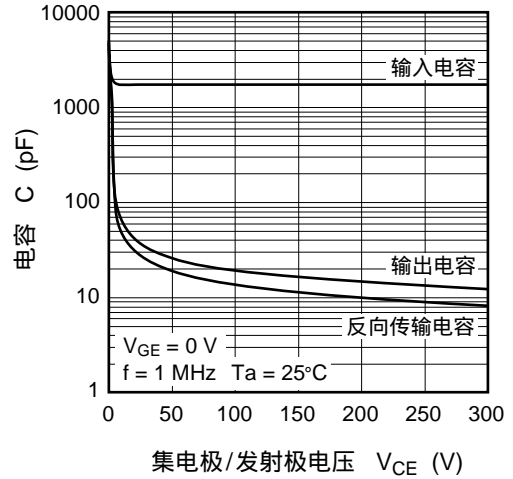
栅极/发射极截止电压-结温 (典型)



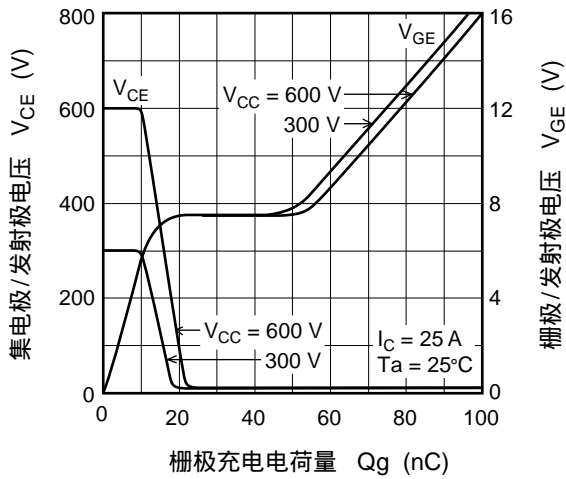
正向电流-正向电压 (典型)



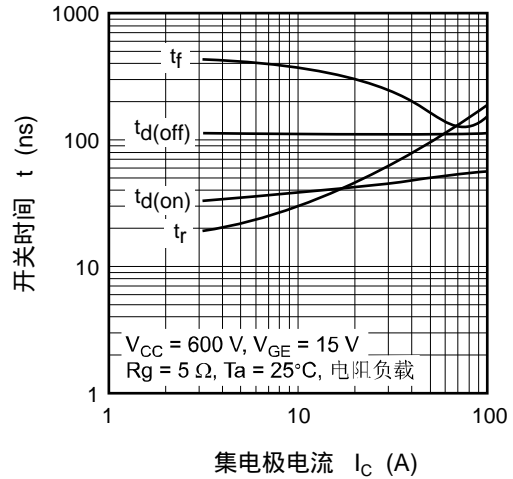
典型电容-集电极/发射极电压



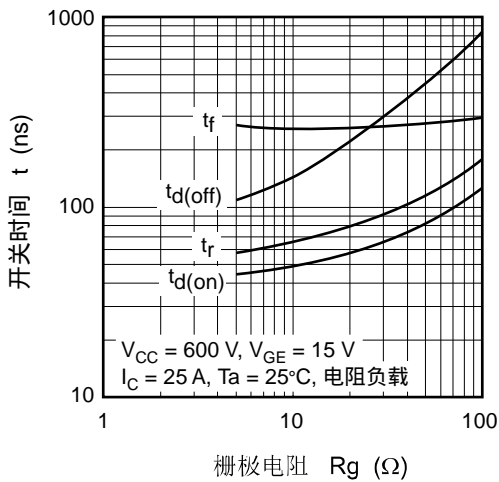
输入时序特性 (典型)



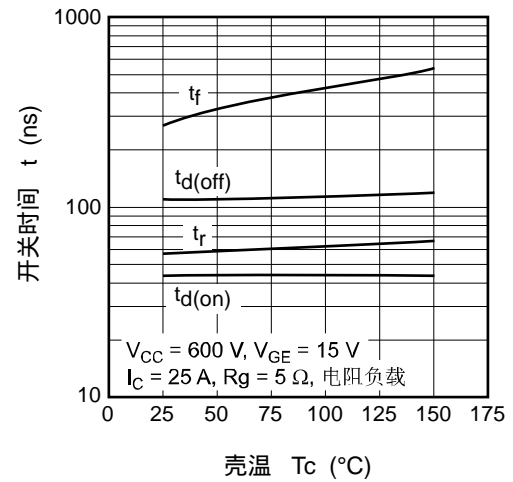
开关特性 (典型) (1)



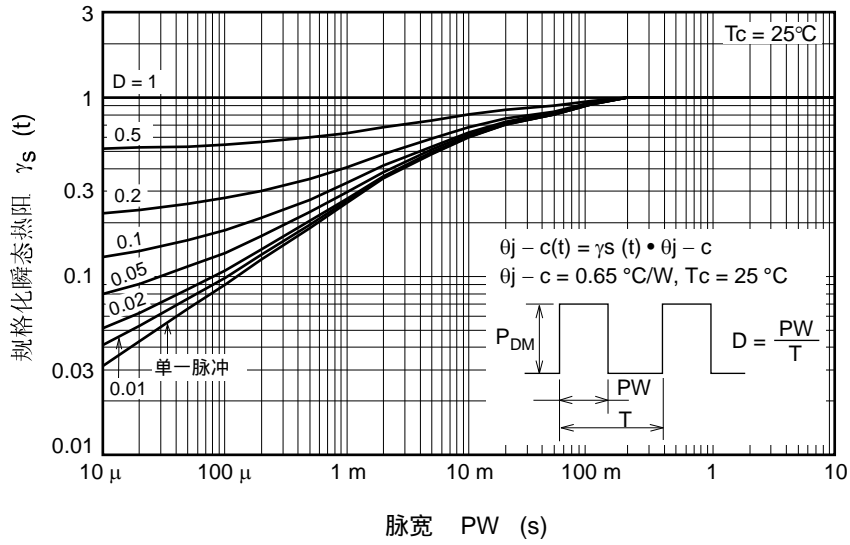
开关特性 (典型) (2)



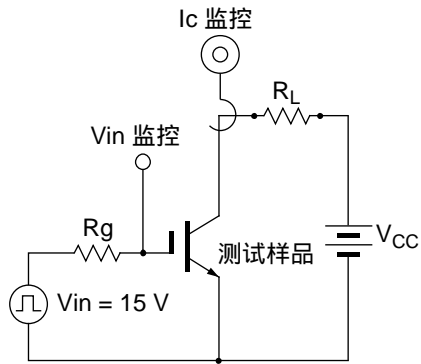
开关特性 (典型) (3)



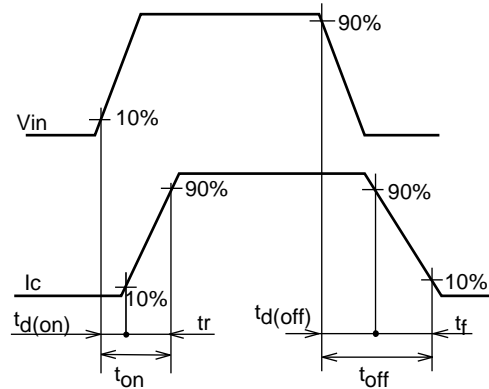
瞬态热阻特性规格化-脉宽



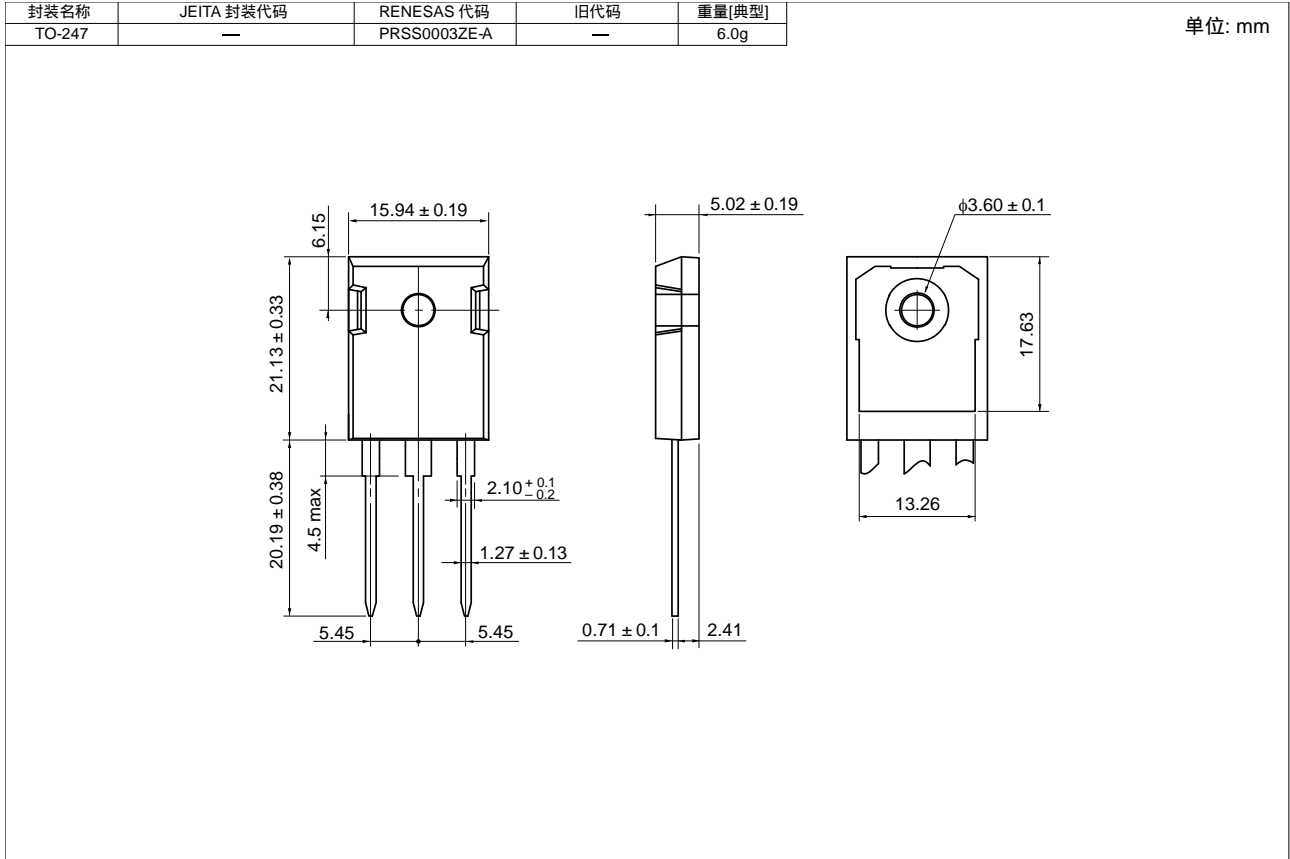
开关时间测定电路



运行波形



封装尺寸



订购信息

订购型号	数量	运输包装
RJH1CF5RDPQ-80#T2	450 枚	纸盒包装 (管状容器)

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