

RJH1BF7RDPQ-80

硅 N 沟道绝缘栅双极晶体管
快速电源开关

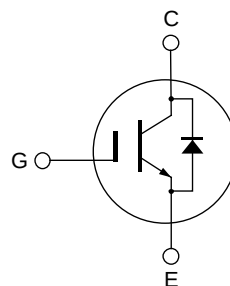
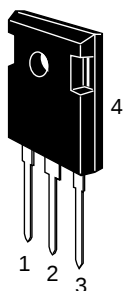
R07DS0394CJ0100
修订版本 1.00
Dec 05, 2011

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
 $V_{CE(sat)} = 1.6\text{ V}$ 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}	1100	V
栅极/发射极电压		V_{GES}	± 30	V
集电极电流	$T_C = 25^{\circ}C$	I_C	60	A
	$T_C = 100^{\circ}C$	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	$^{\circ}C/W$
结温		T_j	150	$^{\circ}C$
储存温度		T_{stg}	-55 to +150	$^{\circ}C$

注: 1. 脉冲宽度限于安全工作区域。

电特性

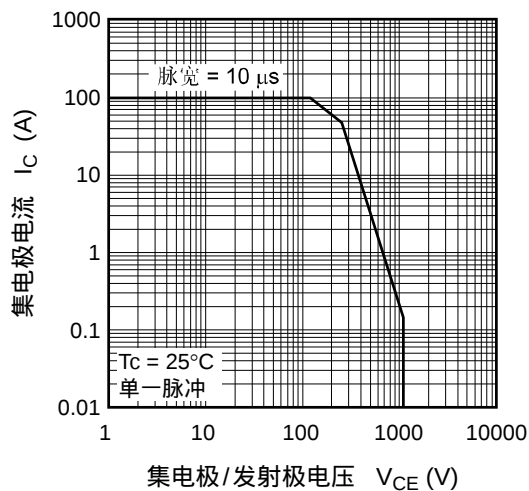
(T_j = 25°C)

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} = 1100 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	5.0	7.0	V	V _{CE} = 10 V, I _C = 1 mA
集电极/发射极饱和电压	V _{CE(sat)}	—	1.6	2.1	V	I _C = 35 A, V _{GE} = 15 V ^{注2}
		—	1.95	2.35	V	I _C = 60 A, V _{GE} = 15 V ^{注2}
输入电容	C _{ies}	—	3260	—	pF	V _{CE} = 25 V V _{GE} = 0 V f = 1 MHz
输出电容	C _{oes}	—	67	—	pF	
反向传输电容	C _{res}	—	54	—	pF	
接通延迟时间	t _{d(on)}	—	58	—	ns	I _C = 35 A V _{CE} = 600 V, V _{GE} = 15 V ^{注2} 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	—	3.0	3.9	V	I _F = 10 A ^{注2}

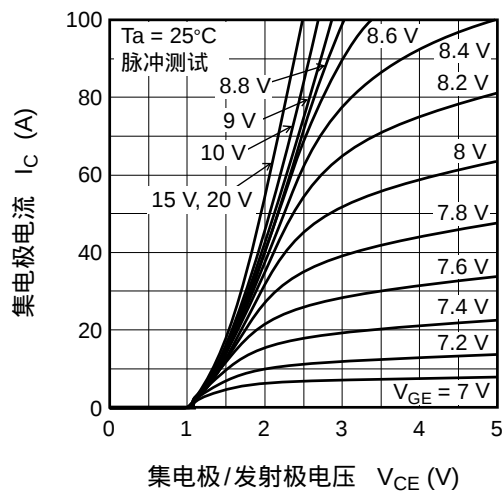
注： 2. 脉冲测试

主要特性

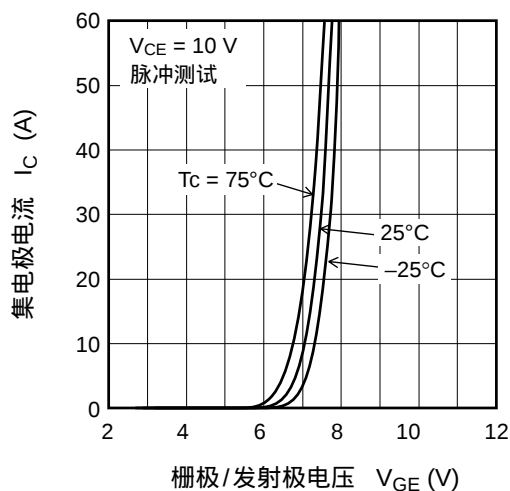
最大安全工作区域



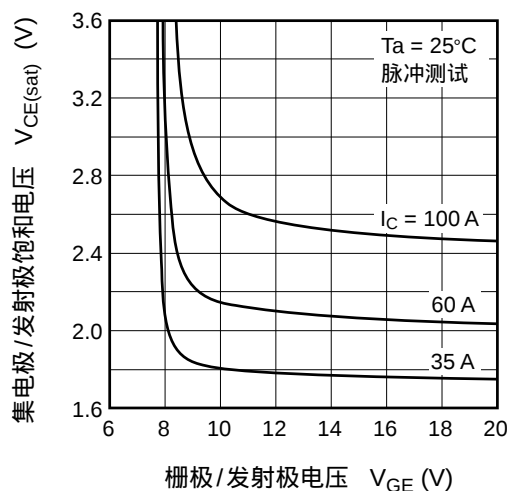
典型输出特性



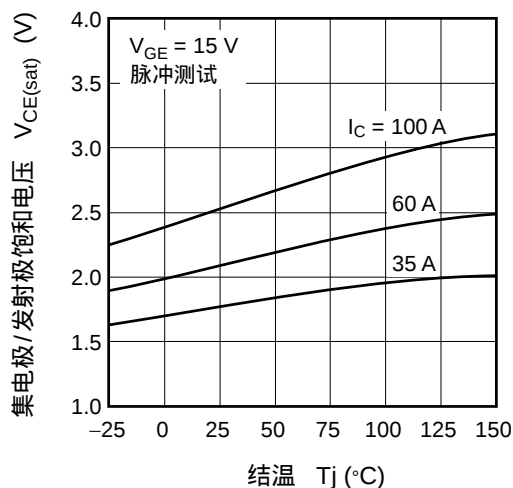
典型传输特性



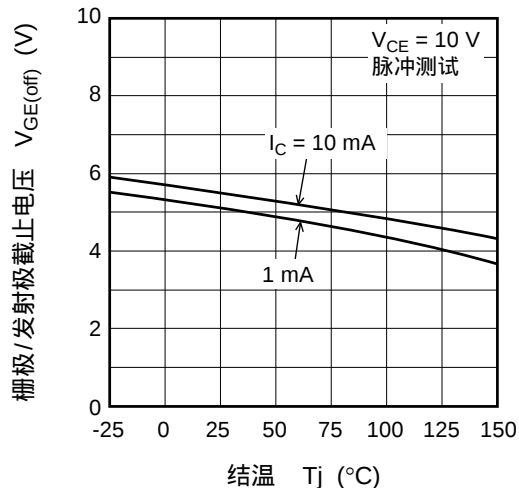
集电极/发射极饱和电压-栅极/发射极电压 (典型)



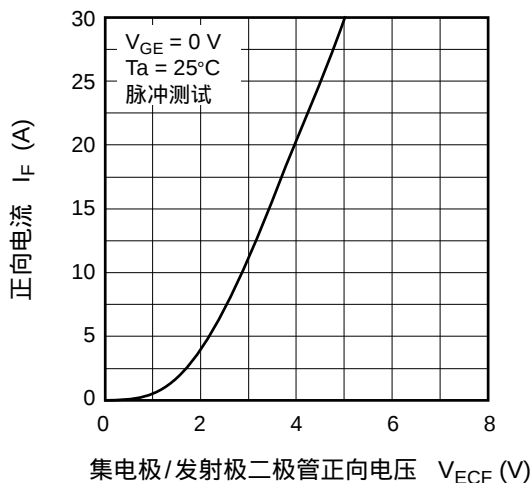
集电极/发射极饱和电压-结温 (典型)



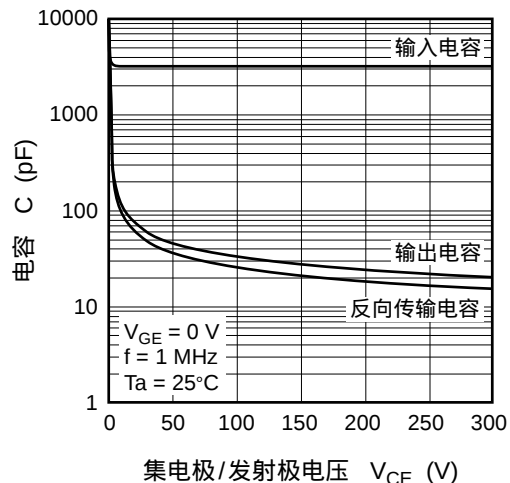
栅极/发射极截止电压-结温 (典型)



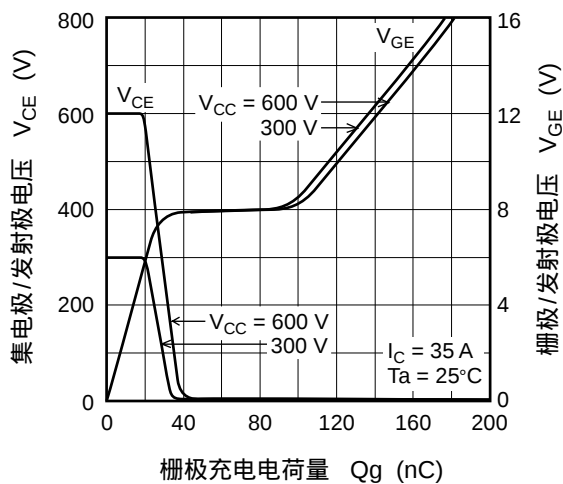
正向电流-正向电压 (典型)



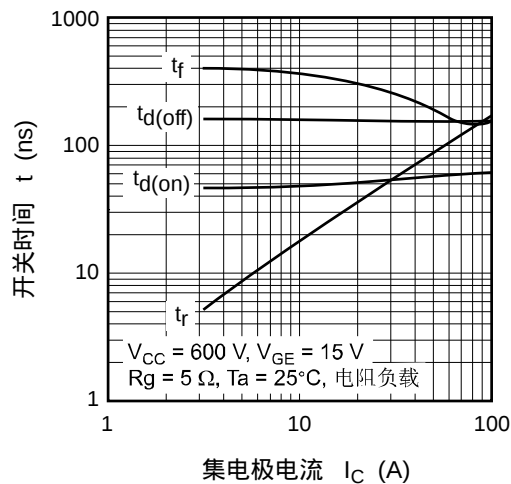
典型电容-集电极/发射极电压



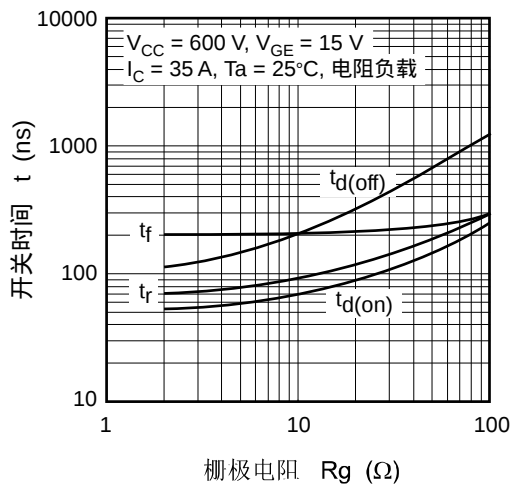
输入时序特性 (典型)



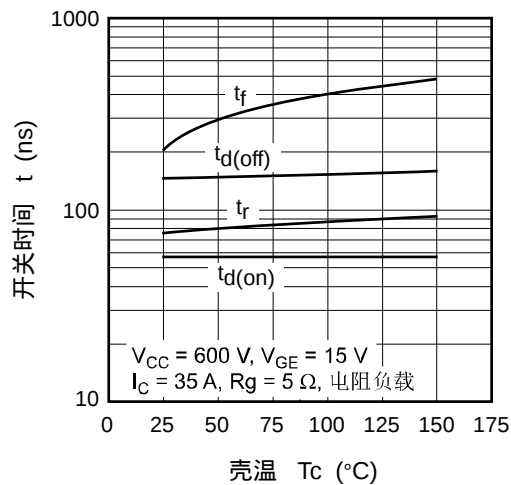
开关特性 (典型) (1)



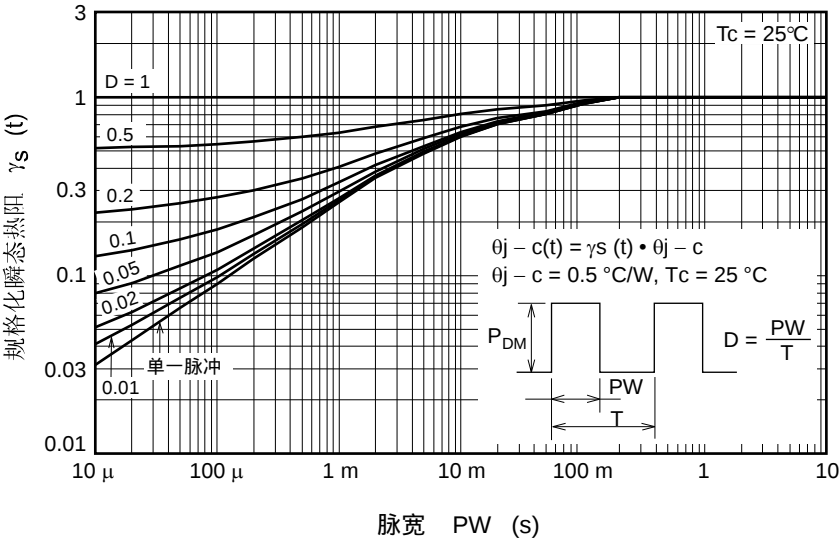
开关特性 (典型) (2)



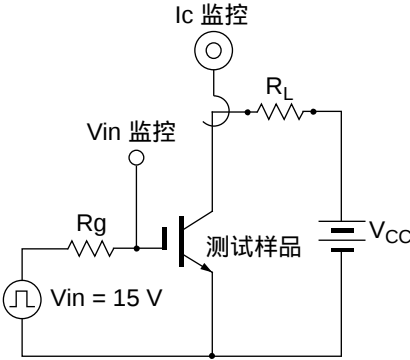
开关特性 (典型) (3)



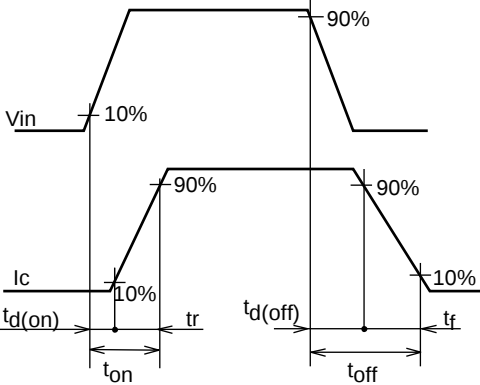
瞬态热阻特性规格化-脉宽



开关时间测定电路



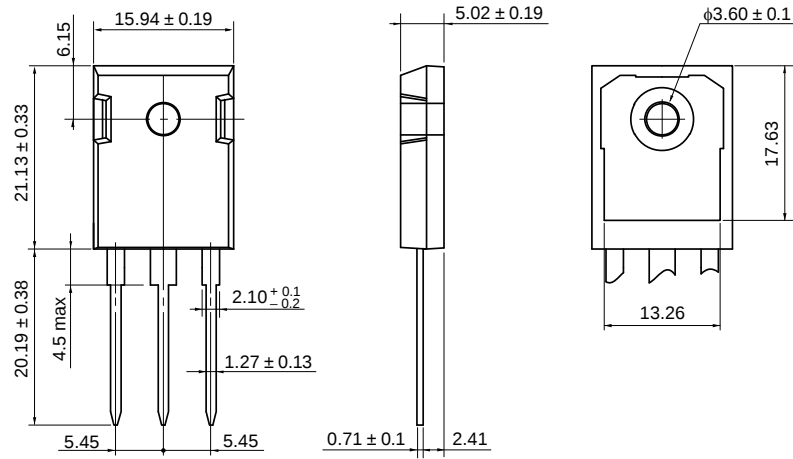
运行波形



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
RJH1BF7RDPQ-80#T2	450 枚	纸盒包装 (管状容器)

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