

# RJP60F5DPK

600V - 40A -绝缘栅双极晶体管  
快速电源开关

R07DS0757CJ0100

修订版本 1.00

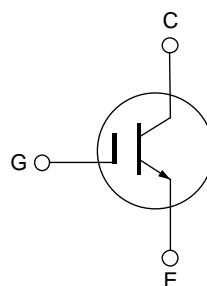
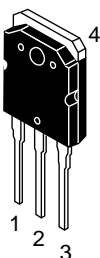
Sep 13, 2012

## 特点

- 低集电极/发射极饱和电压  
 $V_{CE(sat)} = 1.37\text{ V}$  典型值 ( $I_C = 40\text{ A}$ ,  $V_{GE} = 15\text{ V}$ ,  $T_a = 25^\circ\text{C}$ )
- 快速开关时间  
 $t_f = 85\text{ ns}$  典型值 ( $I_C = 30\text{ A}$ ,  $V_{CE} = 400\text{ V}$ ,  $V_{GE} = 15\text{ V}$ ,  $R_g = 5\ \Omega$ ,  $T_a = 25^\circ\text{C}$ , 感性负载)

## 封装形式

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



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	$V_{CES}$	600	V	
栅极/发射极电压	$V_{GES}$	$\pm 30$	V	
集电极电流	$T_c = 25^\circ\text{C}$	$I_C$	80	A
	$T_c = 100^\circ\text{C}$	$I_C$	40	A
集电极脉冲电流	$i_C(\text{peak})$ <sup>注1</sup>	160	A	
集电极最大容许功率损耗	$P_C$	260.4	W	
结壳热阻	$\theta_{j-c}$	0.48	$^\circ\text{C}/\text{W}$	
结温	$T_j$	150	$^\circ\text{C}$	
储存温度	$T_{stg}$	-55 to +150	$^\circ\text{C}$	

注: 1. 脉宽限于安全工作区域

## 电特性

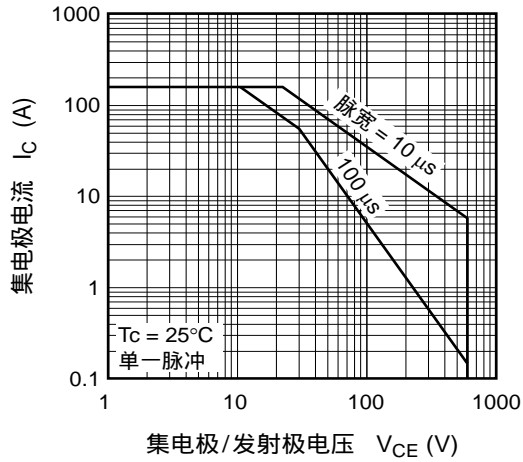
(T<sub>j</sub> = 25°C)

参数	符号	最小值	典型值	最大值	单位	测定条件
集电极/发射极短路电流	I <sub>CES</sub>	—	—	100	μA	V <sub>CE</sub> = 600V, V <sub>GE</sub> = 0
栅极/发射极漏泄电流	I <sub>GES</sub>	—	—	±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>	4	—	8	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>	—	1.37	1.8	V	I <sub>C</sub> = 40 A, V <sub>GE</sub> = 15V <sup>注2</sup>
	V <sub>CE(sat)</sub>	—	1.7	—	V	I <sub>C</sub> = 80 A, V <sub>GE</sub> = 15V <sup>注2</sup>
输入电容	C <sub>ies</sub>	—	2780	—	pF	V <sub>CE</sub> = 25 V V <sub>GE</sub> = 0 V f = 1 MHz
输出电容	C <sub>oes</sub>	—	100	—	pF	
反向传输电容	C <sub>res</sub>	—	43	—	pF	
栅极充电电荷量	Q <sub>g</sub>	—	74	—	nC	V <sub>GE</sub> = 15 V V <sub>CC</sub> = 300 V I <sub>C</sub> = 40 A
栅极/发射极充电电荷量	Q <sub>ge</sub>	—	24	—	nC	
栅极/集电极充电电荷量	Q <sub>gc</sub>	—	26	—	nC	
接通延迟时间	t <sub>d(on)</sub>	—	53	—	ns	I <sub>C</sub> = 30 A, V <sub>CE</sub> = 400 V, V <sub>GE</sub> = 15 V R <sub>g</sub> = 5 Ω <sup>注2</sup> , 感性负载
上升时间	t <sub>r</sub>	—	77	—	ns	
关断延迟时间	t <sub>d(off)</sub>	—	90	—	ns	
下降时间	t <sub>f</sub>	—	85	—	ns	

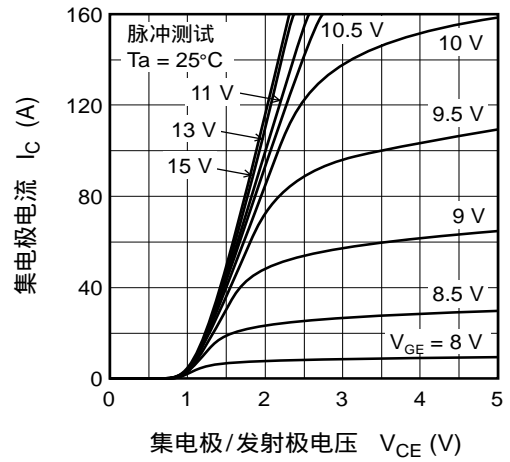
注: 2. 脉冲测试

主要特性

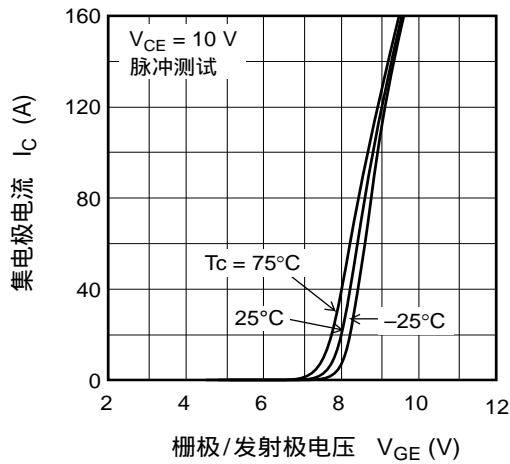
最大安全工作区域



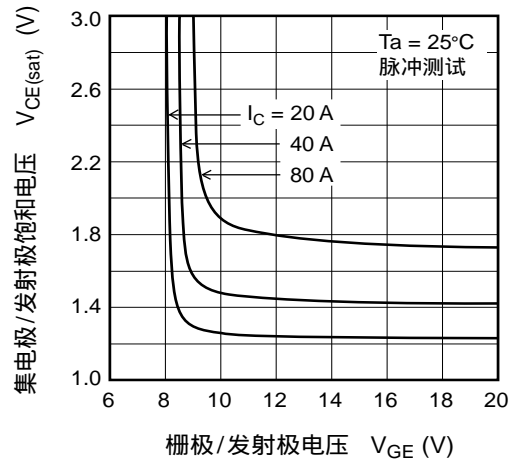
典型输出特性



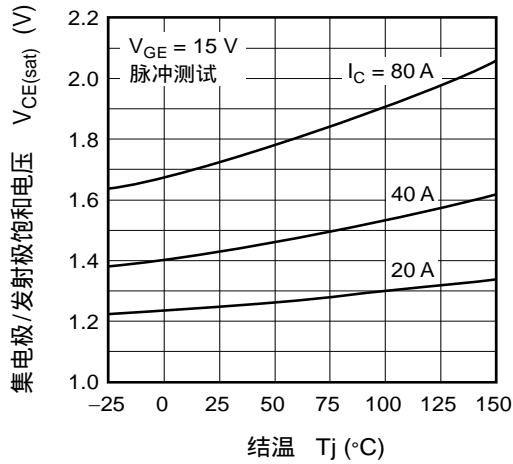
典型传输特性



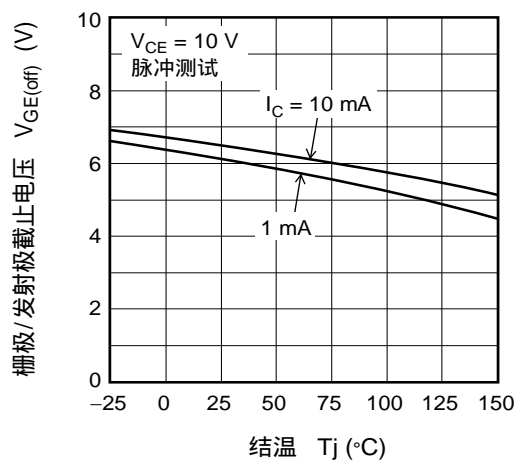
集电极/发射极饱和电压-栅极/发射极电压 (典型)



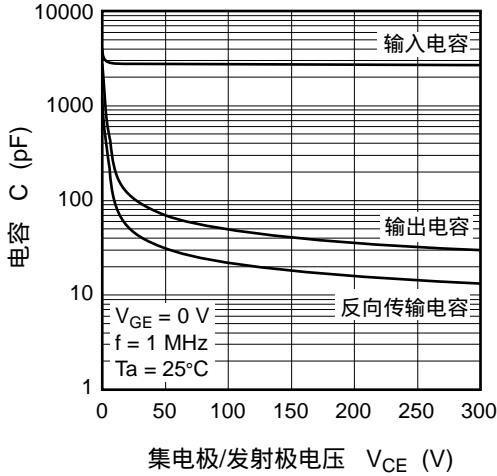
集电极/发射极饱和电压-结温 (典型)



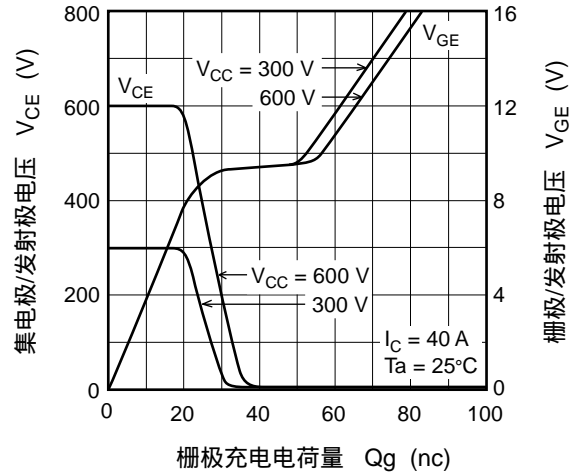
栅极/发射极截止电压-结温 (典型)



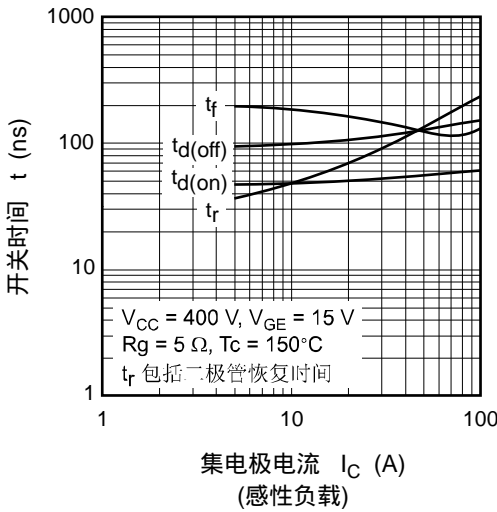
典型电容-集电极/发射极电压



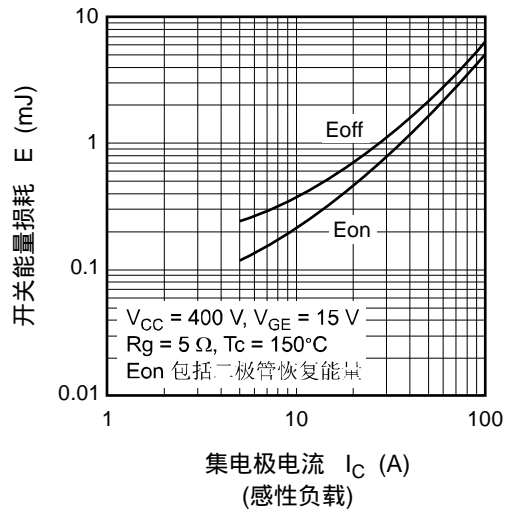
输入时序特性 (典型)



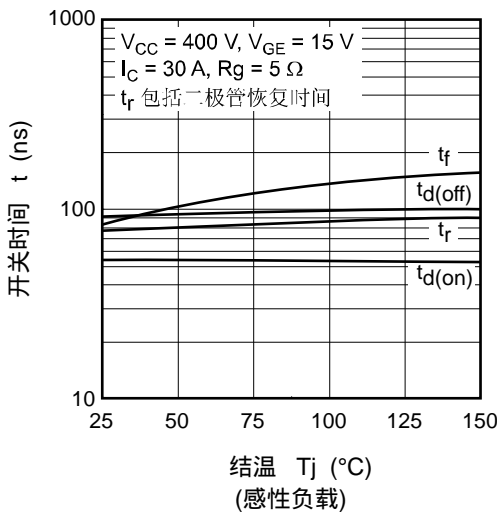
开关特性 (典型) (1)



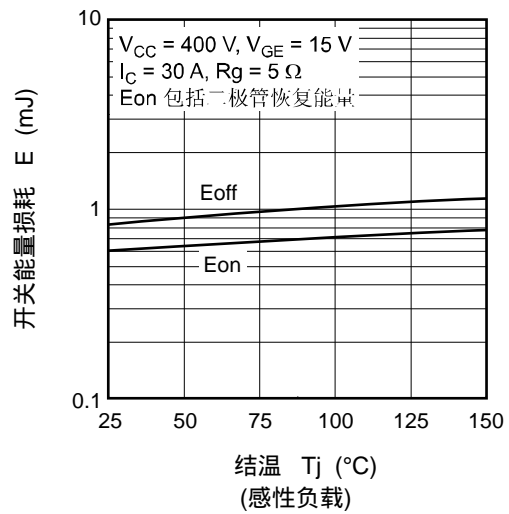
开关特性 (典型) (2)



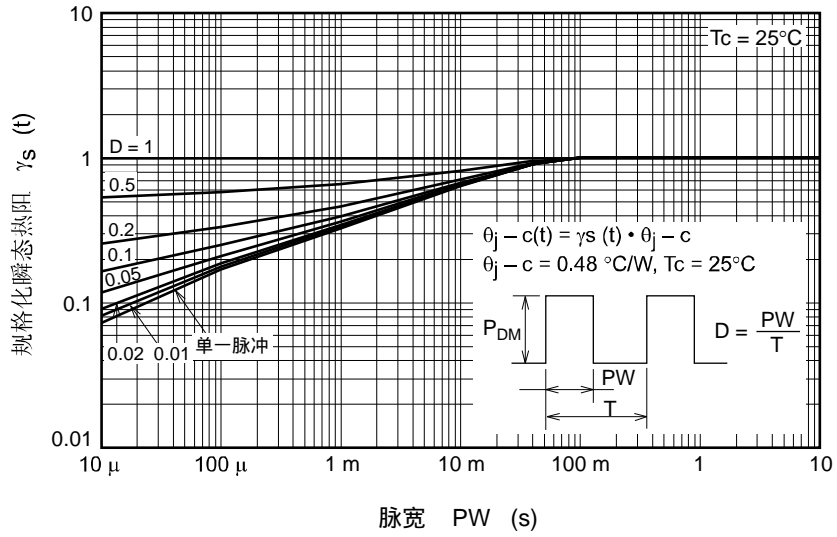
开关特性 (典型) (3)



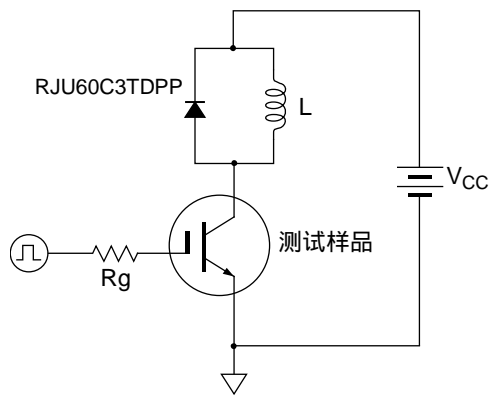
开关特性 (典型) (4)



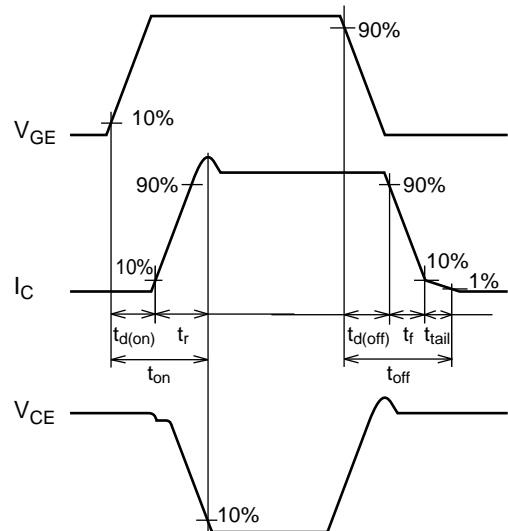
瞬态热阻特性规格化



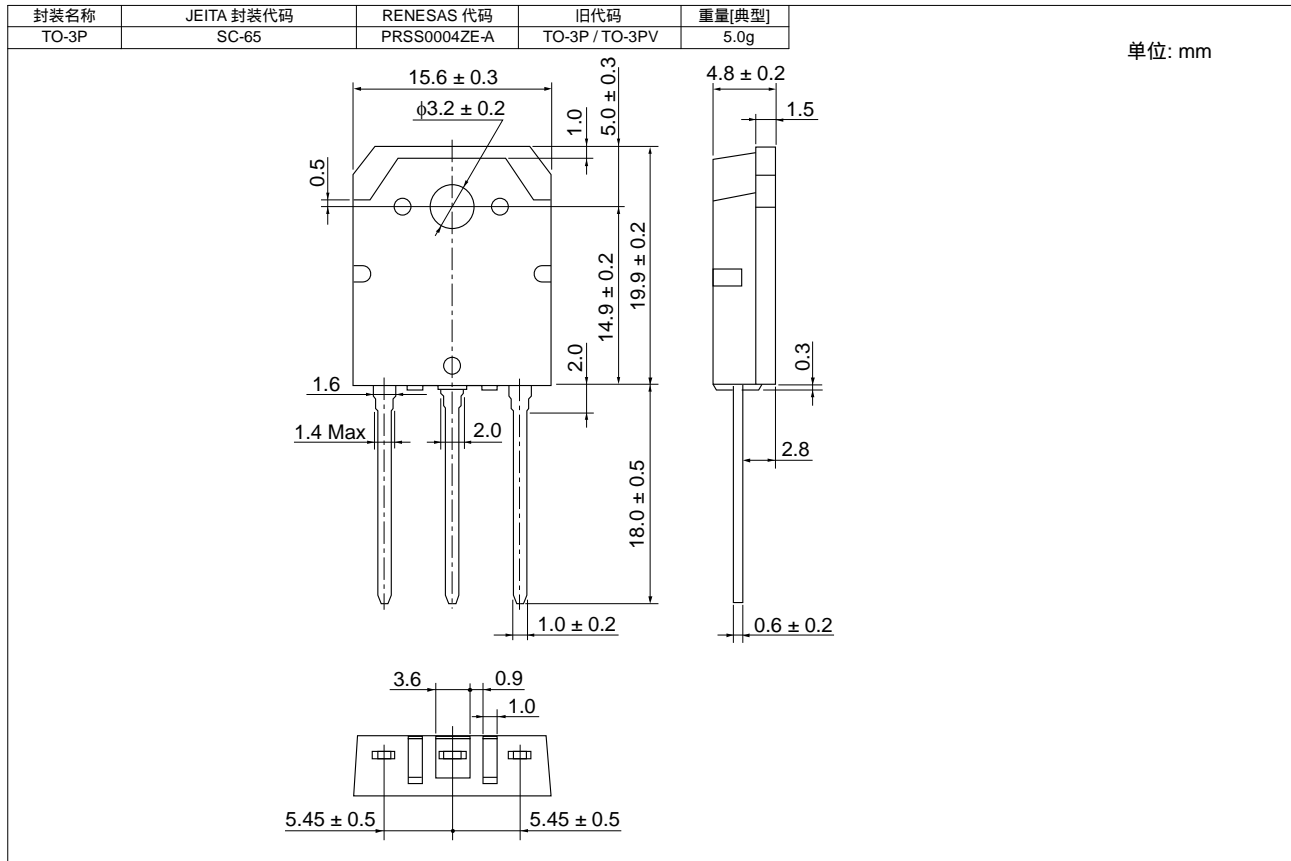
开关时间测定电路



波形



## 封装尺寸



## 订购信息

订购型号	数量	运输包装
RJP60F5DPK-00#T0	360 枚	纸盒包装 (管状容器)

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