

To our customers,

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## Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: <http://www.renesas.com>

April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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# RJH60F0DPK

Silicon N Channel IGBT  
High Speed Power Switching

REJ03G1834-0100

Rev.1.00

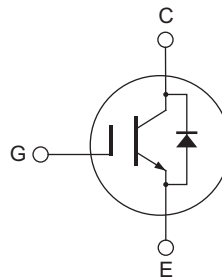
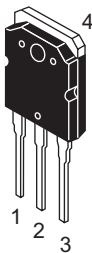
Oct 13, 2009

## Features

- High speed switching
- Low on-state voltage
- Fast recovery diode

## Outline

RENESAS Package code: PRSS0004ZE-A  
(Package name: TO-3P)



1. Gate
2. Collector
3. Emitter
4. Collector (Flange)

## Absolute Maximum Ratings

(T<sub>c</sub> = 25°C)

Item		Symbol	Ratings	Unit
Collector to emitter voltage		V <sub>CES</sub>	600	V
Gate to emitter voltage		V <sub>GES</sub>	±30	V
Collector current	T <sub>c</sub> = 25 °C	I <sub>C</sub> <sup>Note1</sup>	50	A
	T <sub>c</sub> = 100°C	I <sub>C</sub> <sup>Note1</sup>	25	A
Collector peak current		i <sub>c(peak)</sub> <sup>Note1</sup>	100	A
Collector to emitter diode forward peak current		i <sub>DF(peak)</sub> <sup>Note2</sup>	100	A
Collector dissipation		P <sub>C</sub> <sup>Note3</sup>	201.6	W
Channel temperature		T <sub>j</sub>	150	°C
Storage temperature		T <sub>stg</sub>	-55 to +150	°C

Notes: 1. Pulse width limited by safe operating area.

2. PW ≤ 5 μs, duty cycle ≤ 1%

3. Value at T<sub>c</sub> = 25°C

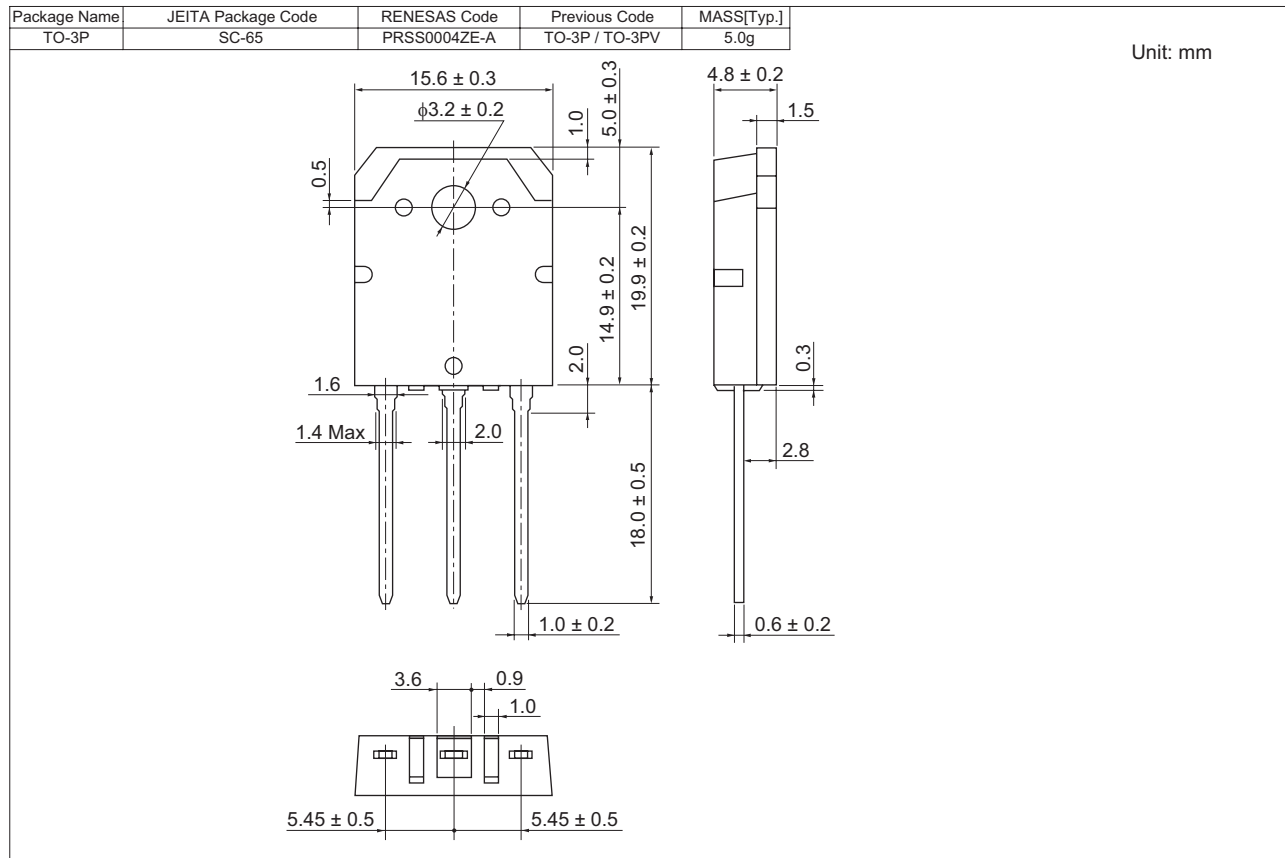
## Electrical Characteristics

(T<sub>j</sub> = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Zero gate voltage collector current	I <sub>CES</sub>	—	—	100	μA	V <sub>CE</sub> = 600V, V <sub>GE</sub> = 0
Gate to emitter leak current	I <sub>GES</sub>	—	—	±1	μA	V <sub>GE</sub> = ±30 V, V <sub>CE</sub> = 0
Gate to emitter cutoff voltage	V <sub>GE(off)</sub>	4	—	8	V	V <sub>CE</sub> = 10V, I <sub>C</sub> = 1 mA
Collector to emitter saturation voltage	V <sub>CE(sat)</sub>	—	1.4	1.82	V	I <sub>C</sub> = 25 A, V <sub>GE</sub> = 15V <sup>Note4</sup>
		—	1.7	—	V	I <sub>C</sub> = 50 A, V <sub>GE</sub> = 15V <sup>Note4</sup>
Switching time	t <sub>f</sub>	—	90	—	ns	I <sub>C</sub> = 30 A, Resistive Load V <sub>CC</sub> = 300 V V <sub>GE</sub> = 15 V R <sub>g</sub> = 5 Ω <sup>Note4</sup>
C-E diode forward voltage	V <sub>ECF1</sub>	—	1.6	2.1	V	I <sub>F</sub> = 20 A <sup>Note4</sup>
C-E diode forward voltage	V <sub>ECF2</sub>	—	1.8	—	V	I <sub>F</sub> = 40 A <sup>Note4</sup>
C-E diode reverse recovery time	t <sub>rr</sub>	—	140	—	ns	I <sub>F</sub> = 20 A di <sub>F</sub> /dt = 100 A/μs

Notes: 4. Pulse test

## Package Dimensions



## Ordering Information

Part No.	Quantity	Shipping Container
RJH60F0DPK-00-T0	360 pcs	Box (Tube)

Notes:

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