

RJH60F7ADPK

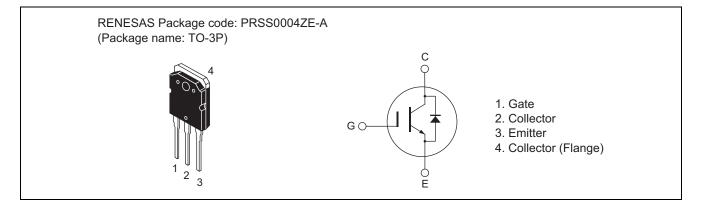
Silicon N Channel IGBT High Speed Power Switching

REJ03G1837-0100 Rev.1.00 Oct 13, 2009

Features

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

Outline



Absolute Maximum Ratings

 $(Tc = 25^{\circ}C)$

	Item	Symbol	Ratings	Unit
Collector to emitter vol	tage	V _{CES}	600	V
Gate to emitter voltage)	V _{GES}	±30	V
Collector current	Tc = 25°C	Ic	90	Α
	Tc = 100°C	Ic	50	А
Collector peak current		ic(peak) Note1	180	Α
Collector to emitter dio	de forward peak current	i _{DF} (peak) Note2	100	Α
Collector dissipation		Pc	328.9	W
Junction to case therm	al impedance (IGBT)	θј-с	0.38	°C/W
Junction to case therm	al impedance (Diode)	θј-с	2.0	°C/W
Junction temperature		Tj	150	°C
Storage temperature		Tstg	-55 to +150	°C

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

2. $PW \le 5 \mu s$, duty cycle $\le 1\%$

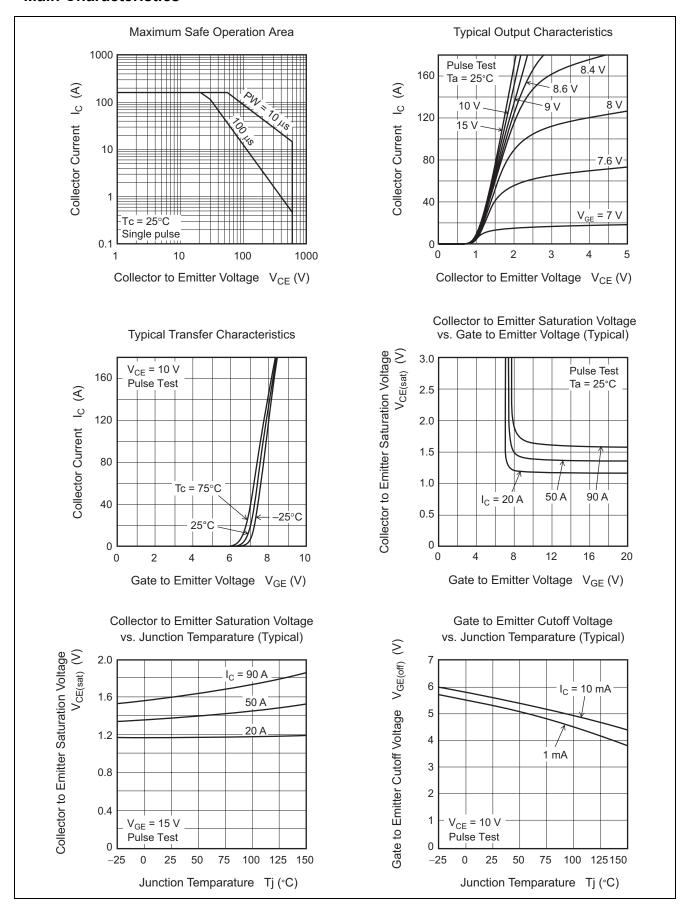
Electrical Characteristics

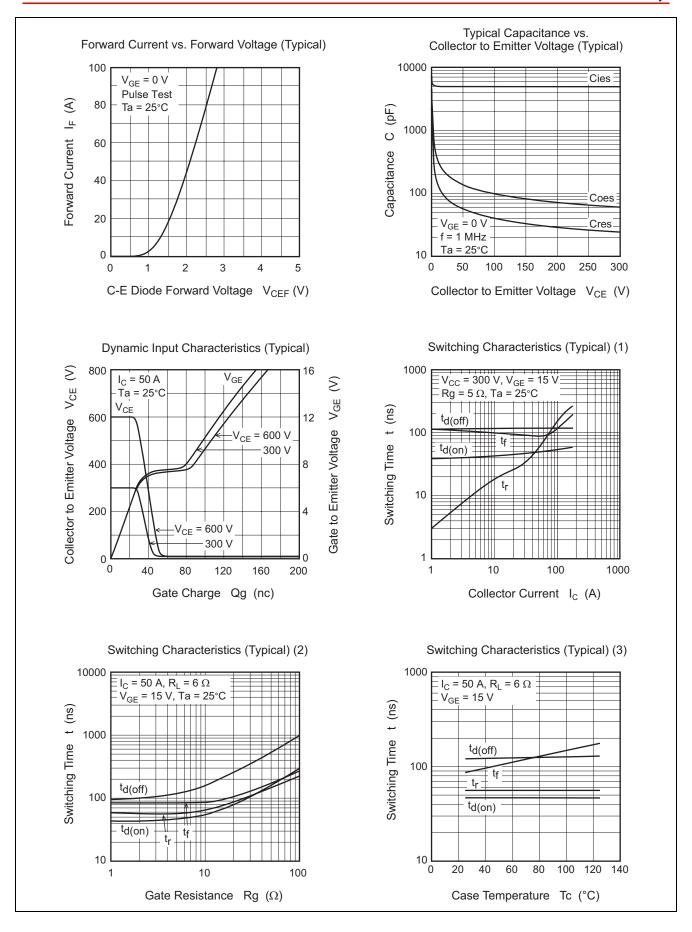
 $(Tj = 25^{\circ}C)$

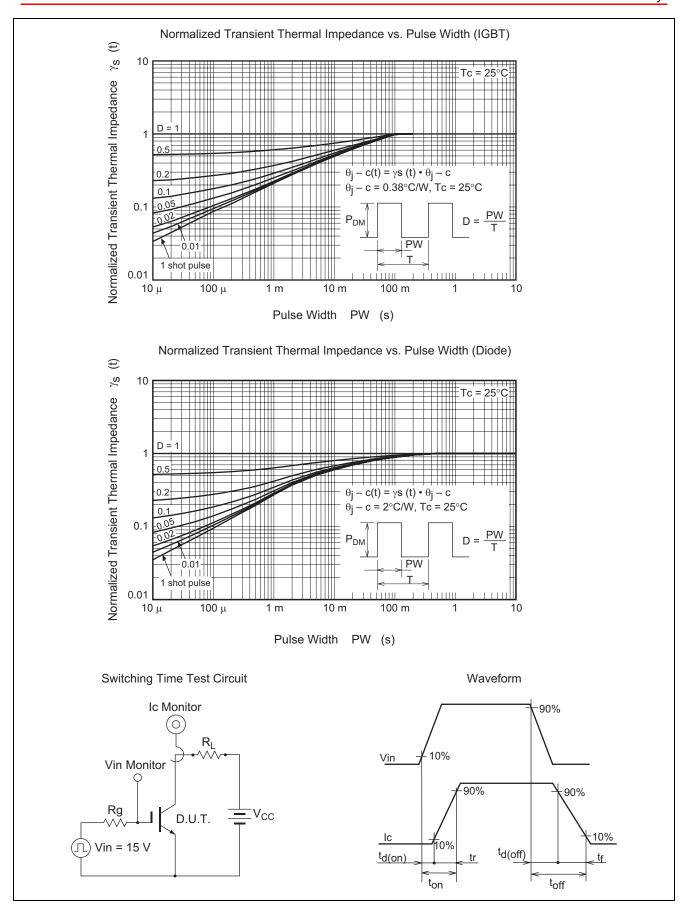
Item	Symbol	Min	Тур	Max	Unit	Test Conditions
Zero gate voltage collector current	I _{CES}	_	_	100	μΑ	$V_{CE} = 600V, V_{GE} = 0$
Gate to emitter leak current	I _{GES}	_	_	±1	μА	$V_{GE} = \pm 30 \text{ V}, V_{CE} = 0$
Gate to emitter cutoff voltage	$V_{\text{GE(off)}}$	4	_	8	V	$V_{CE} = 10V, I_{C} = 1 \text{ mA}$
Collector to emitter saturation voltage	V _{CE(sat)}	_	_	1.75	V	$I_C = 50 \text{ A}, V_{GE} = 15V^{\text{Note3}}$
	V _{CE(sat)}	_	1.6	_	V	$I_C = 90 \text{ A}, V_{GE} = 15V^{\text{Note3}}$
Input capacitance	Cies	_	4890	_	pF	V _{CE} = 25 V
Output capacitance	Coes	_	198	_	pF	V _{GE} = 0 V
Reverse transfer capacitance	Cres	_	83	_		f = 1 MHz
Switching time	t _{d(on)}	_	48	_	ns	I _C = 30 A, Resistive Load
	t _r	_	36	_	ns	V _{CC} = 300 V
	t _{d(off)}	_	122	_	ns	V _{GE} = 15 V
	t _f	_	95	_	ns	Rg = 5 Ω Note3
C-E diode forward voltage	V _{ECF1}	_	1.6	2.1	V	I _F = 20 A ^{Note3}
C-E diode reverse recovery time	t _{rr}	_	140	_	ns	I _F = 20 A
						$di_F/dt = 100 A/\mu s$

Notes: 3. Pulse test

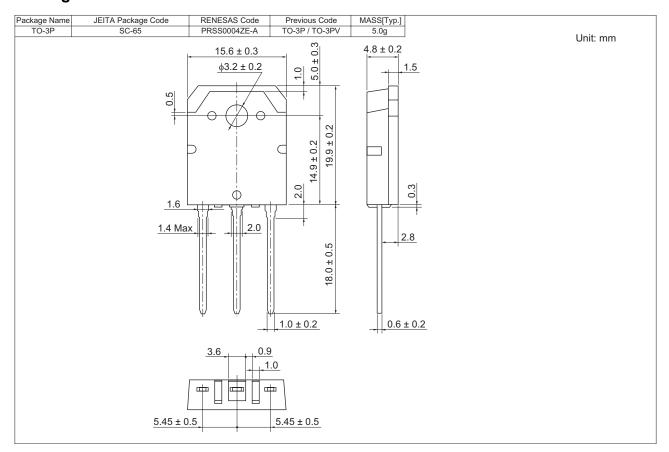
Main Characteristics







Package Dimensions



Ordering Information

Part No.	Quantity	Shipping Container
RJH60F7ADPK-00-T0	360 pcs	Box (Tube)

Renesas Technology Corp. sales Strategic Planning Div. Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan

- Renesas lechnology Corp. Sales Strategic Planning Div. Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan Notes:

 1. This document is provided for reference purposes only so that Renesas customers may select the appropriate Renesas products for their use. Renesas neither makes warrantes or representations with respect to the accuracy or completeness of the information in this document nor grants any license to any intellectual property girbs to any other rights of representations with respect to the information in this document in this document of the purpose of the respect to the information in this document in the product data, diagrams, charts, programs, algorithms, and application circuit examples.

 3. You should not use the products of the technology described in this document for the purpose of military use. When exporting the products or technology described herein, you should follow the applicable export control laws and regulations, and procedures required by such laws and regulations, and procedures required to change without any plan protein. Before purchasing or using any Renesas products listed in this document, in the development is satisfied. The procedure is a such as that disclosed through our website, (http://www.renesas.com)

 3. Renesas has a used reasonable care in compling the information included in this document, but requires a subject to the procedure of the procedure of the procedure of t



RENESAS SALES OFFICES

http://www.renesas.com

Refer to "http://www.renesas.com/en/network" for the latest and detailed information.

Renesas Technology America, Inc.

450 Holger Way, San Jose, CA 95134-1368, U.S.A Tel: <1> (408) 382-7500, Fax: <1> (408) 382-7501

Renesas Technology Europe Limited
Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K.
Tel: <44> (1628) 585-100, Fax: <44> (1628) 585-900

Renesas Technology (Shanghai) Co., Ltd.
Unit 204, 205, AZIACenter, No.1233 Lujiazui Ring Rd, Pudong District, Shanghai, China 200120 Tel: <86> (21) 5877-1818, Fax: <86> (21) 6887-7858/7898

Renesas Technology Hong Kong Ltd.
7th Floor, North Tower, World Finance Centre, Harbour City, Canton Road, Tsimshatsui, Kowloon, Hong Kong Tel: <852> 2265-6688, Fax: <852> 2377-3473

Renesas Technology Taiwan Co., Ltd. 10th Floor, No.99, Fushing North Road, Taipei, Taiwan Tel: <886> (2) 2715-2888, Fax: <886> (2) 3518-3399

Renesas Technology Singapore Pte. Ltd.
1 Harbour Front Avenue, #06-10, Keppel Bay Tower, Singapore 098632 Tel: <65> 6213-0200, Fax: <65> 6278-8001

Renesas Technology Korea Co., Ltd. Kukje Center Bldg. 18th Fl., 191, 2-ka, Hangang-ro, Yongsan-ku, Seoul 140-702, Korea Tel: <82> (2) 796-3115, Fax: <82> (2) 796-2145

Renesas Technology 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: <603> 7955-9390, Fax: <603> 7955-9510