

RJH60F0DPK

Silicon N Channel IGBT
High Speed Power Switching

REJ03G1834-0100

Rev.1.00

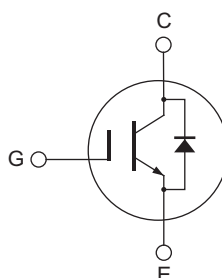
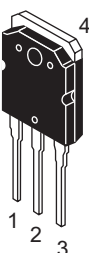
Oct 13, 2009

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_c = 25°C)

Item		Symbol	Ratings	Unit
Collector to emitter voltage		V _{CES}	600	V
Gate to emitter voltage		V _{GES}	±30	V
Collector current	T _c = 25 °C	I _C ^{Note1}	50	A
	T _c = 100°C	I _C ^{Note1}	25	A
Collector peak current		i _C (peak) ^{Note1}	100	A
Collector to emitter diode forward peak current		i _{DF} (peak) ^{Note2}	100	A
Collector dissipation		P _C ^{Note3}	201.6	W
Channel temperature		T _J	150	°C
Storage temperature		T _{stg}	-55 to +150	°C

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

2. PW ≤ 5 μs, duty cycle ≤ 1%

3. Value at T_c = 25°C

Electrical Characteristics

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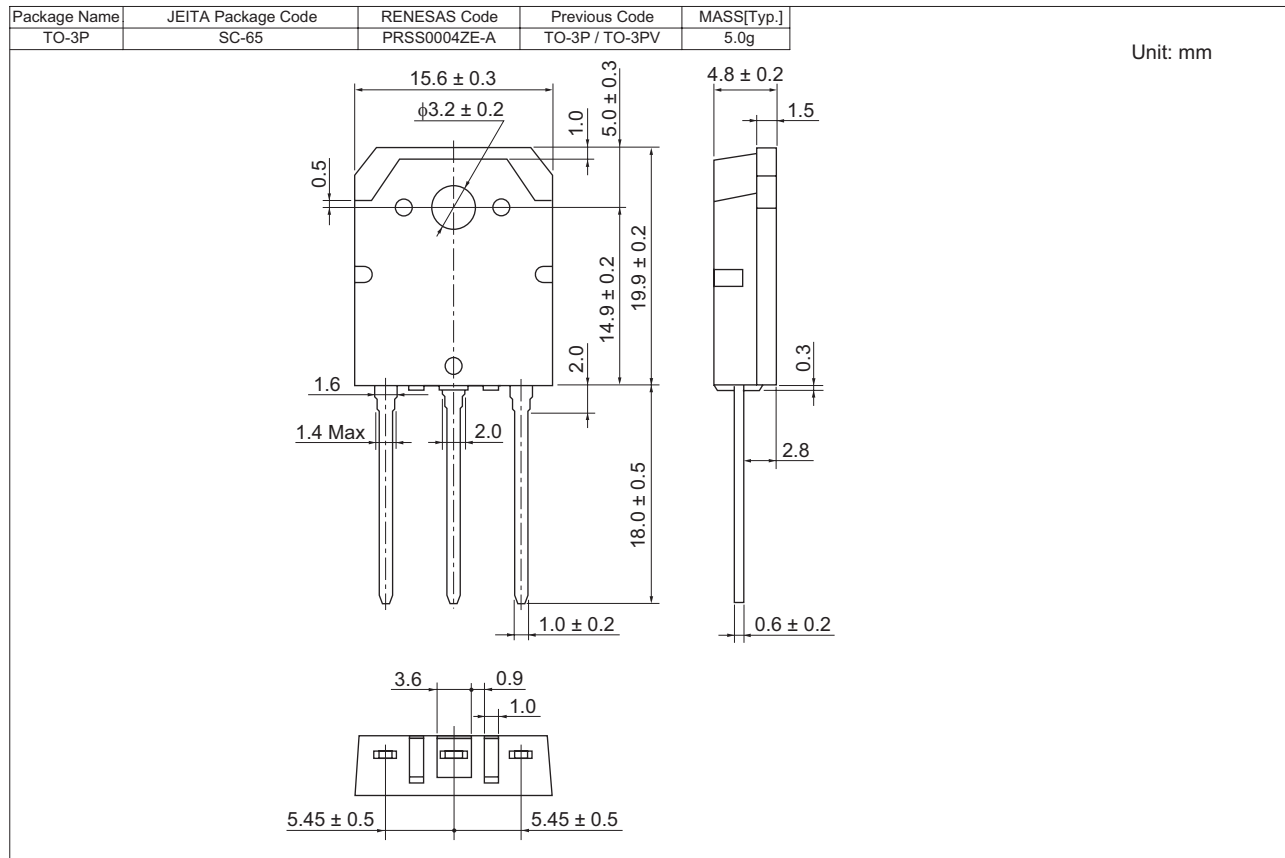
(Tj = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Zero gate voltage collector current	I_{CES}	—	—	100	μA	$V_{CE} = 600\text{V}$, $V_{GE} = 0$
Gate to emitter leak current	I_{GES}	—	—	± 1	μA	$V_{GE} = \pm 30\text{V}$, $V_{CE} = 0$
Gate to emitter cutoff voltage	$V_{GE(off)}$	4	—	8	V	$V_{CE} = 10\text{V}$, $I_C = 1\text{mA}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	1.4	1.82	V	$I_C = 25\text{A}$, $V_{GE} = 15\text{V}$ ^{Note4}
		—	1.7	—	V	$I_C = 50\text{A}$, $V_{GE} = 15\text{V}$ ^{Note4}
Switching time	t_f	—	90	—	ns	$I_C = 30\text{A}$, Resistive Load $V_{CC} = 300\text{V}$ $V_{GE} = 15\text{V}$ $R_g = 5\Omega$ ^{Note4}
C-E diode forward voltage	V_{ECF1}	—	1.6	2.1	V	$I_F = 20\text{A}$ ^{Note4}
C-E diode forward voltage	V_{ECF2}	—	1.8	—	V	$I_F = 40\text{A}$ ^{Note4}
C-E diode reverse recovery time	t_{rr}	—	140	—	ns	$I_F = 20\text{A}$ $di_F/dt = 100\text{A}/\mu\text{s}$

Notes: 4. Pulse test

Package Dimensions

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Ordering Information

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

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