

RJP30K3DPP-M0

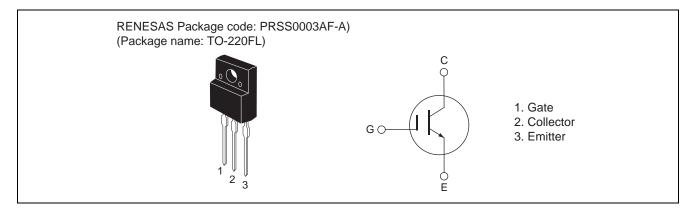
Silicon N Channel IGBT High Speed Power Switching

R07DS0501EJ0100 Rev.1.00 Jul 05, 2011

Features

- Trench gate and thin wafer technology (G6H-II series)
- Low collector to emitter saturation voltage $V_{CE(sat)} = 1.1V \text{ typ}$
- High speed switching tr = 90 ns typ, tf = 250 ns typ
- Low leak current $I_{CES} = 1 \mu A \text{ max}$
- Isolated package TO-220FL

Outline



Absolute Maximum Ratings

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

Item	Symbol	Ratings	Unit
Collector to emitter voltage	V _{CES}	360	V
Gate to emitter voltage	V _{GES}	±30	V
Collector current	Ic	40	Α
Collector peak current	ic(peak) Note1	300	А
Collector dissipation	P _C Note2	30	W
Junction to case thermal impedance	θј-с	4.17	°C/W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C

Notes: 1. PW \leq 10 μ s, duty cycle \leq 1%

2. Value at Tc = 25°C

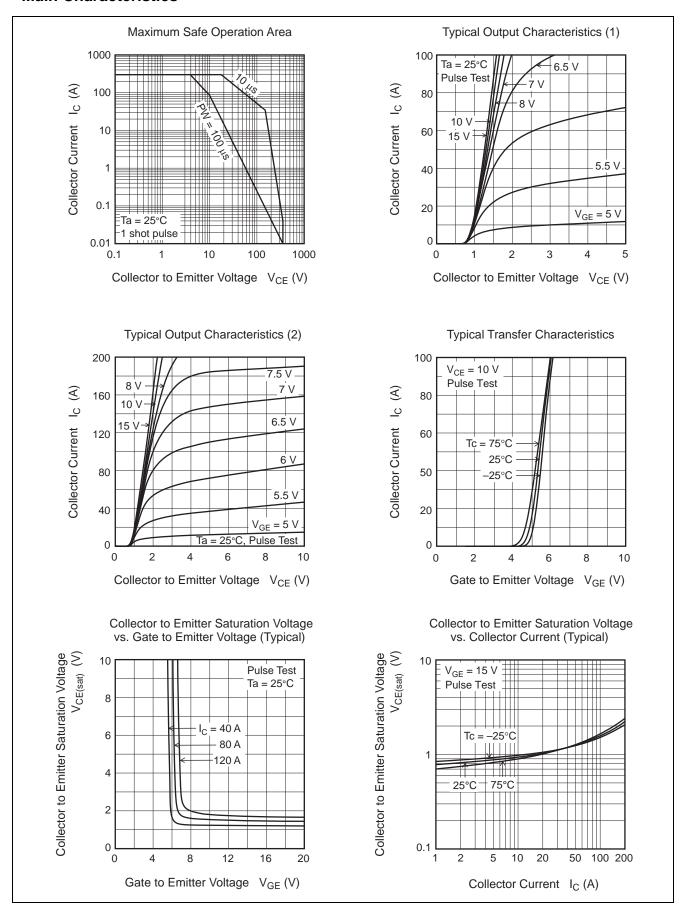
Electrical Characteristics

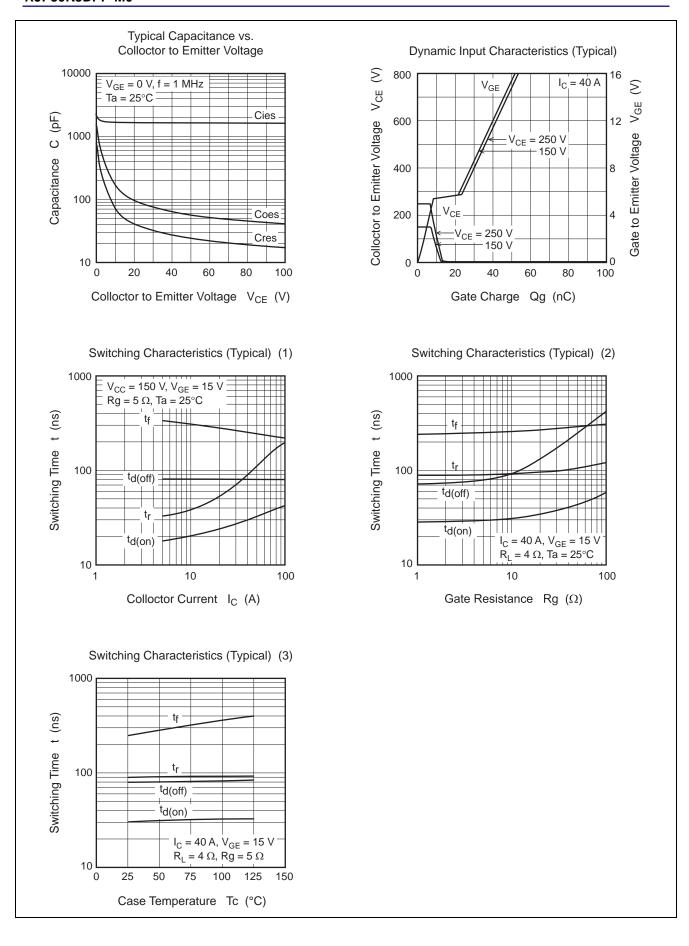
 $(Ta = 25^{\circ}C)$

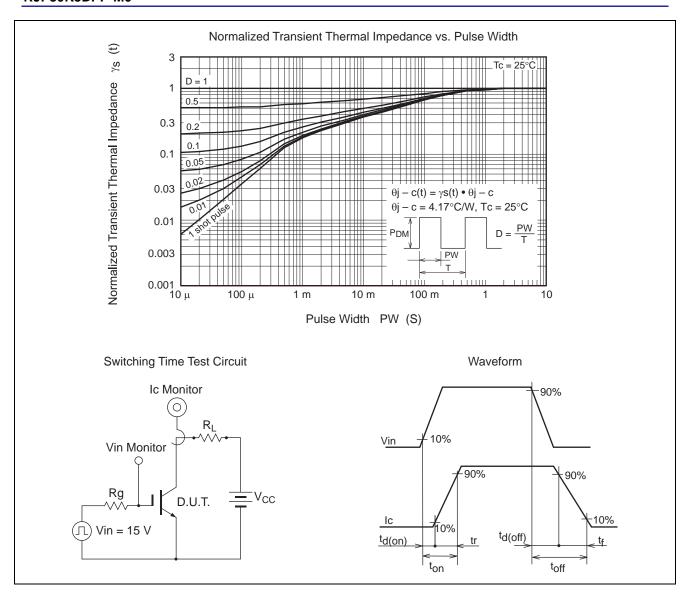
Item	Symbol	Min	Тур	Max	Unit	Test Conditions
Zero gate voltage collector current	I _{CES}	_	_	1	μΑ	$V_{CE} = 360 \text{ V}, V_{GE} = 0$
Gate to emitter leak current	I _{GES}	_	_	±100	nA	$V_{GE} = \pm 30 \text{ V}, V_{CE} = 0$
Gate to emitter cutoff voltage	V _{GE(off)}	2.5	_	5	V	$V_{CE} = 10 \text{ V}, I_{C} = 1 \text{ mA}$
Collector to emitter saturation voltage	V _{CE(sat)}	_	1.1	1.6	V	$I_C = 40 \text{ A}, V_{GE} = 15 \text{ V}^{\text{Note3}}$
Input capacitance	Cies	_	1700	_	pF	V _{CE} = 25 V
Output capacitance	Coes	_	84	_	pF	$V_{GE} = 0$
Reveres transfer capacitance	Cres	_	36	_	pF	f = 1 MHz
Total gate charge	Qg	_	49	_	nC	V _{GE} = 15 V
Gate to emitter charge	Qge	_	9	_	nC	V _{CE} = 150 V
Gate to collector charge	Qgc	_	13	_	nC	$I_{C} = 40 \text{ A}$
Switching time	t _{d(on)}	_	0.03	_	μS	I _C = 40 A
	t _r	_	0.09	_	μS	$R_L = 4 \Omega$
	t _{d(off)}	_	0.08	_	μS	V _{GE} = 15 V
	t _f	_	0.25	_	μS	$R_G = 5 \Omega$

Notes: 3. Pulse test.

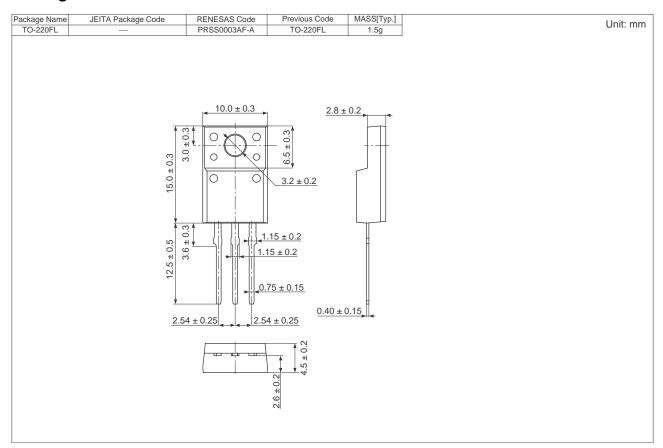
Main Characteristics







Package Dimension



Ordering Information

Orderable Part Number	Quantity	Shipping Container
RJP30K3DPP-M0-T2	600 pcs	Box(Tube)

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