

RJP30H1DPP-M0

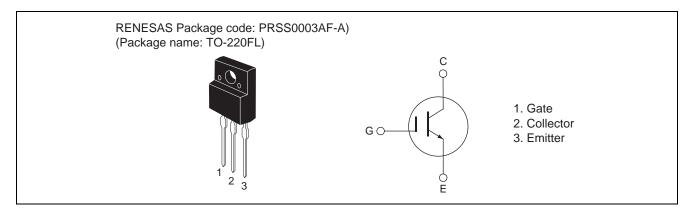
Silicon N Channel IGBT High speed power switching

R07DS0466EJ0200 Rev.2.00 Jun 15, 2011

Features

- Trench gate and thin wafer technology (G6H-II series)
- High speed switching: $t_r = 80$ ns typ., $t_f = 150$ ns typ.
- Low collector to emitter saturation voltage: $V_{CE(sat)}$ = 1.5 V 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	I _C	30	А
Collector peak current	ic(peak) Note1	200	A
Collector dissipation	P _C Note2	20	W
Junction to case thermal impedance	θј-с	6.25	°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. Tc = 25°C

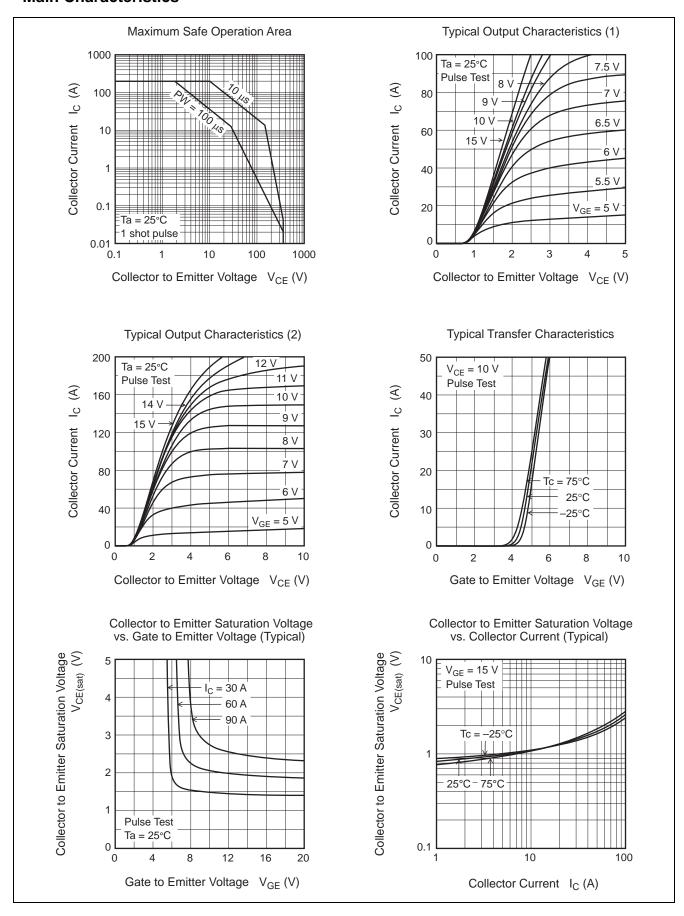
Electrical Characteristics

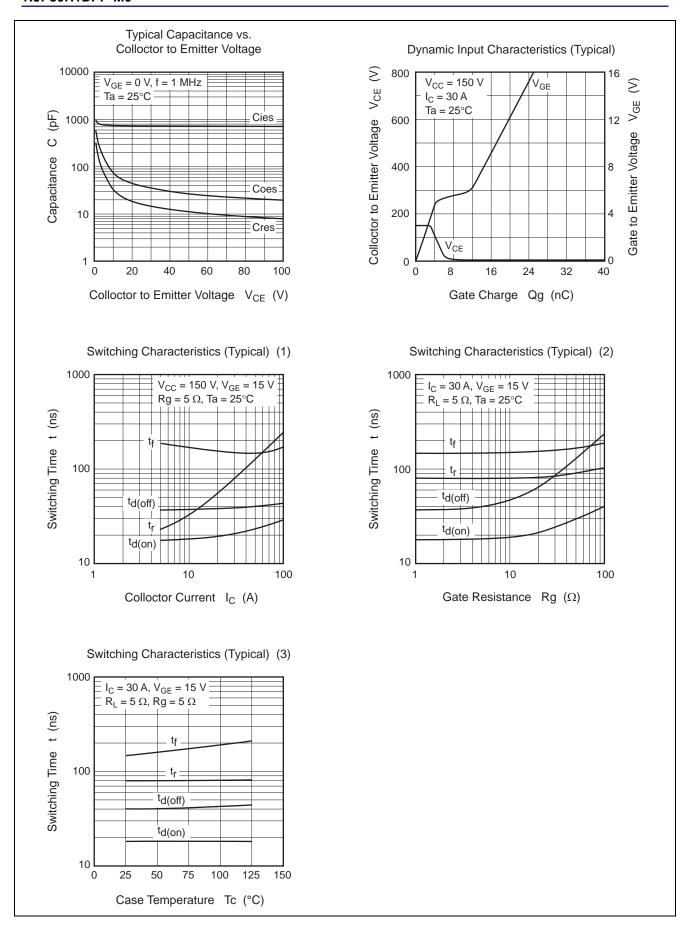
 $(Ta = 25^{\circ}C)$

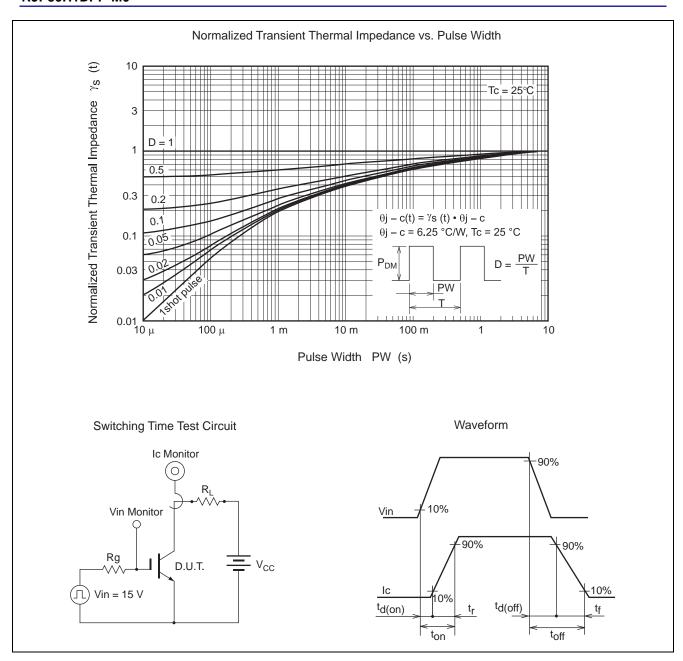
Item	Symbol	Min	Тур	Max	Unit	Test Conditions
Zero gate voltage collector current	I _{CES}	_	_	1	μΑ	$V_{CE} = 360 \text{ V}, V_{GE} = 0$
Gate to emitter leak current	I _{GES}		_	±100	nA	$V_{GE} = \pm 30 \text{ V}, V_{CE} = 0$
Gate to emitter cutoff voltage	$V_{GE(off)}$	2.5	_	5	V	$V_{CE} = 10 \text{ V}, I_{C} = 1 \text{ mA}$
Collector to emitter saturation	V _{CE(sat)}	_	1.5	2	V	$I_C = 30A$, $V_{GE} = 15 V^{Note3}$
voltage						
Input capacitance	Cies	1	740	_	pF	V _{CE} = 25 V
Output capacitance	Coes	_	40	_	pF	V _{GE} = 0 f = 1 MHz
Reveres transfer capacitance	Cres	1	17	_	pF	
Total gate charge	Qg	_	23	_	nC	V _{GE} = 15 V V _{CE} = 150 V I _C = 30 A
Gate to emitter charge	Qge	_	4	_	nC	
Gate to collector charge	Qgc	_	8	_	nC	
Switching time	t _{d(on)}	_	0.02	_	μS	I _C = 30 A
	t _r	_	0.08	_	μS	$R_L = 5 \Omega$ $V_{GE} = 15 V$ $R_G = 5 \Omega$
	t _{d(off)}		0.04	_	μS	
	t _f		0.15		μS	

Notes: 3. Pulse test

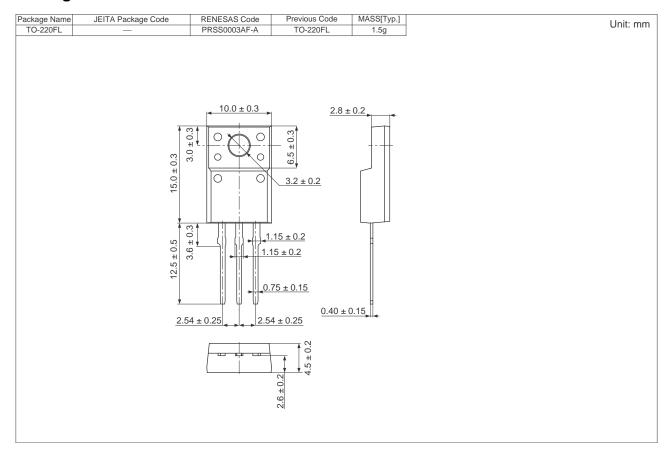
Main Characteristics







Package Dimensions



Ordering Information

Orderable Part Number	Quantity	Shipping Container
RJP30H1DPP-M0-T2	600 pcs	Box (Tube)

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