

RJP6085DPN

Silicon N Channel IGBT
High Speed Power Switching

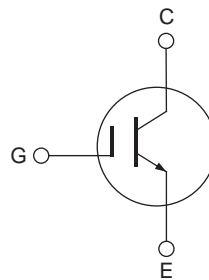
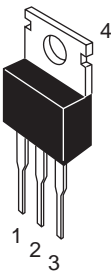
REJ03G1863-0100
Rev.1.00
Nov 09, 2009

Features

- High speed switching
- Low collector to emitter saturation voltage

Outline

RENESAS Package code: PRSS0004AC-A)
(Package name: TO-220AB)



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

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to Emitter voltage	V_{CES}	600	V
Gate to Emitter voltage	V_{GES}	±30	V
Collector current	I_C	40	A
Collector peak current	$I_{C(peak)}$ ^{Note1}	80	A
Collector dissipation	P_C ^{Note2}	178.5	W
Junction to case thermal impedance	θ_{j-c} ^{Note2}	0.7	°C/W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

- Notes: 1. Pulse width limited by safe operating area.
2. Value at Tc = 25°C

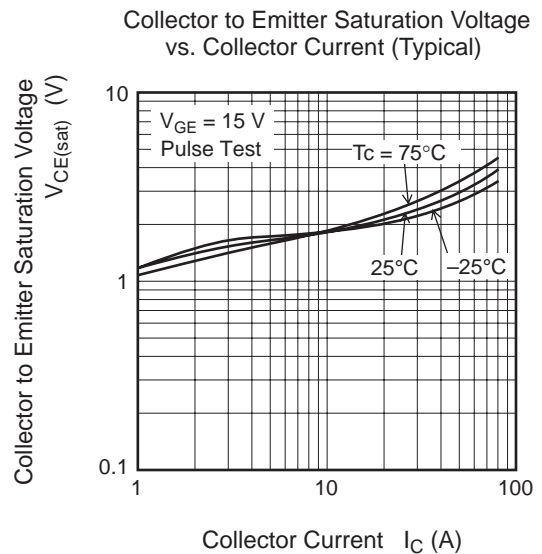
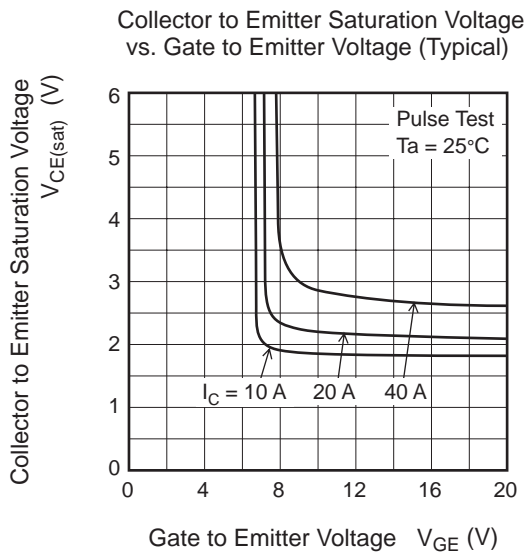
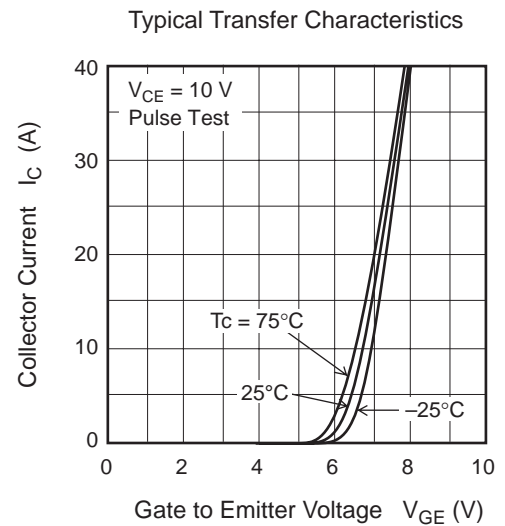
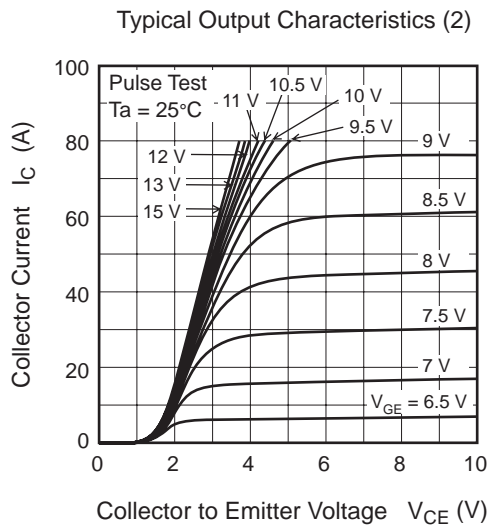
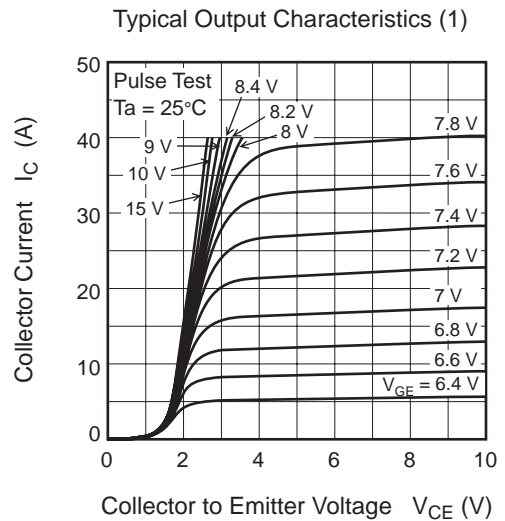
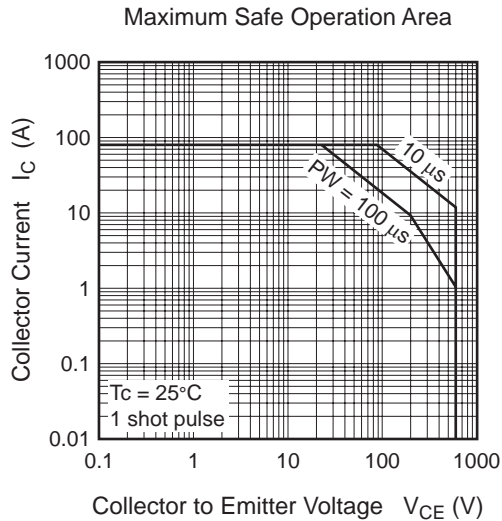
Electrical Characteristics

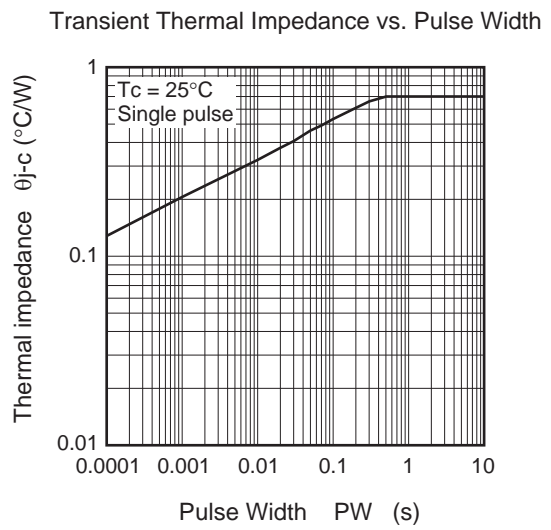
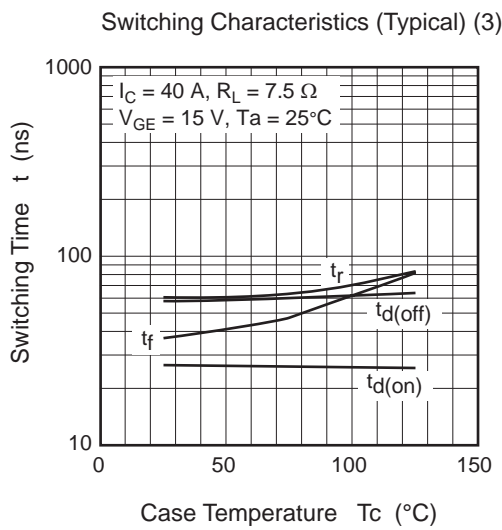
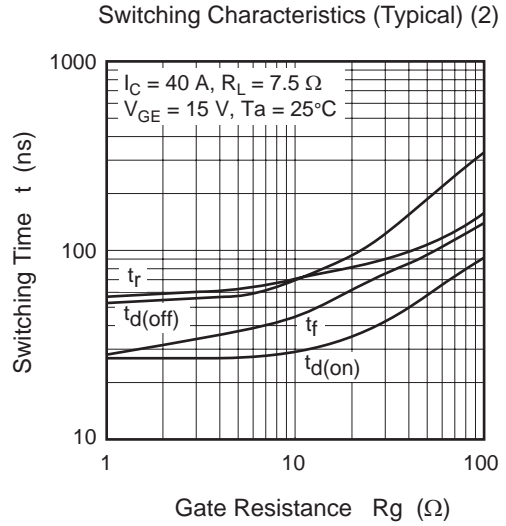
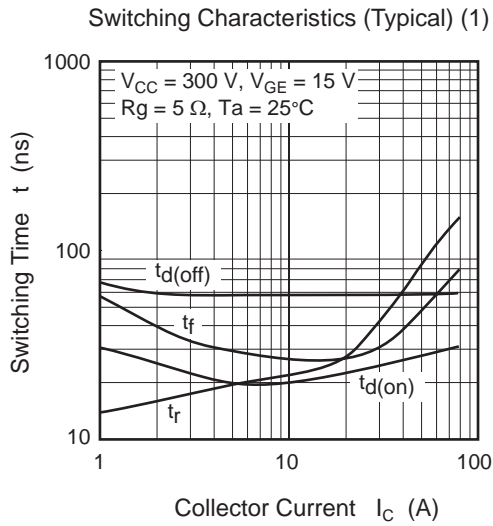
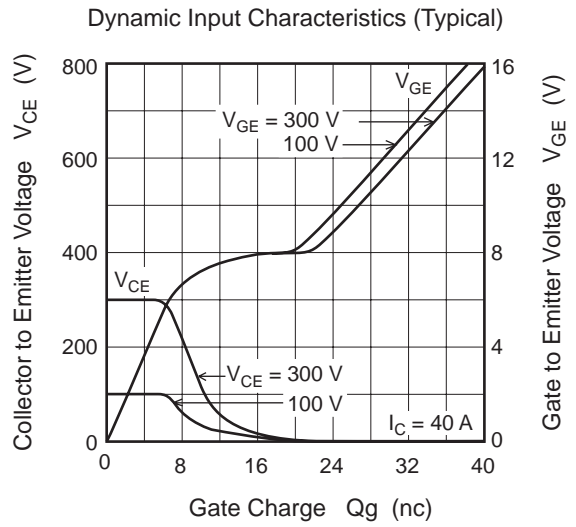
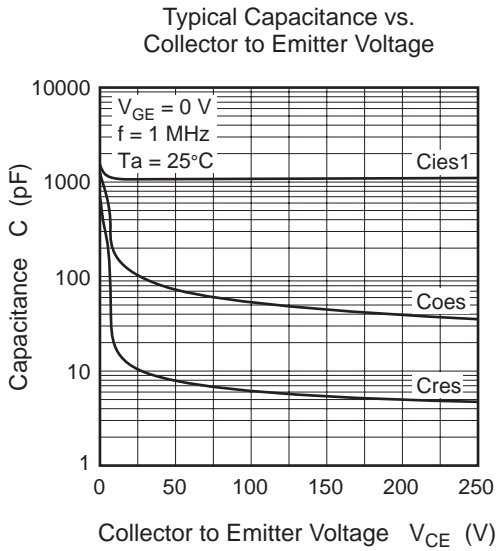
(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Zero gate voltage collector current	I_{CES}	—	—	10	μA	$V_{CE} = 600\text{V}$, $V_{GE} = 0\text{V}$
Gate to emitter leak current	I_{GES}	—	—	± 1	μA	$V_{GE} = \pm 30\text{V}$, $V_{CE} = 0\text{V}$
Gate to emitter cutoff voltage	$V_{GE(off)}$	4	—	6	V	$V_{CE} = 10\text{V}$, $I_C = 1\text{mA}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	2.65	3.5	V	$I_C = 40\text{A}$, $V_{GE} = 15\text{V}$ ^{Note3}
Input capacitance	C_{ies}	—	1150	—	pF	$V_{CE} = 25\text{V}$
Output capacitance	C_{oes}	—	105	—	pF	$V_{GE} = 0\text{V}$
Reveres transfer capacitance	C_{res}	—	12	—	pF	$f = 1\text{MHz}$
Switching time	$t_{d(on)}$	—	30	—	ns	$I_C = 40\text{A}$, Resistive Load
	t_r	—	60	—	ns	$V_{CC} = 300\text{V}$
	$t_{d(off)}$	—	60	—	ns	$V_{GE} = 15\text{V}$
	t_f	—	40	—	ns	$R_g = 5\ \Omega$

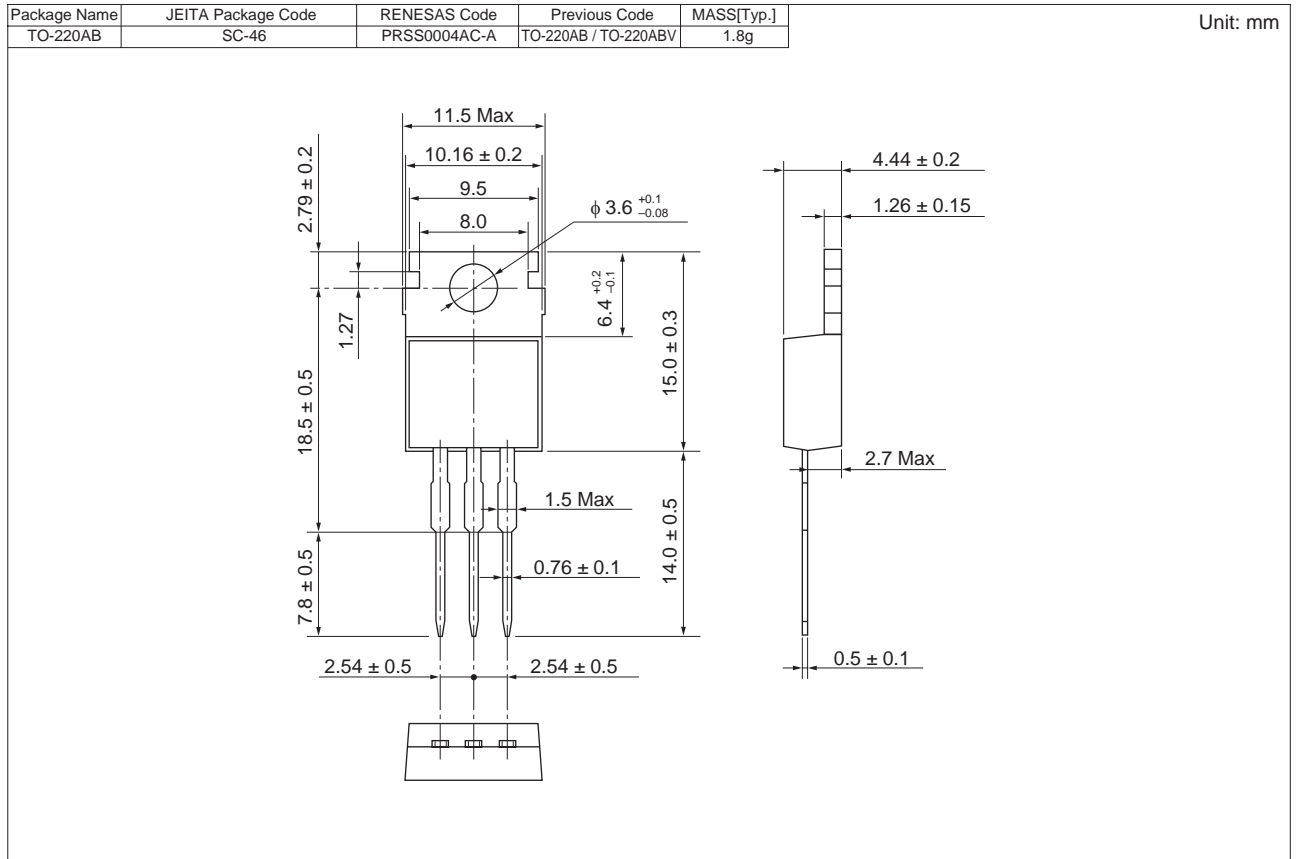
Notes: 3. Pulse test

Main Characteristics





Package Dimensions



Ordering Information

Part No.	Quantity	Shipping Container
RJP6085DPN-00-T2	600 pcs	Box (Tube)

Notes:

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