

RJP65S08DWT/RJP65S08DWA

650V - 200A - IGBT

Application: Inverter

R07DS0825EJ0002

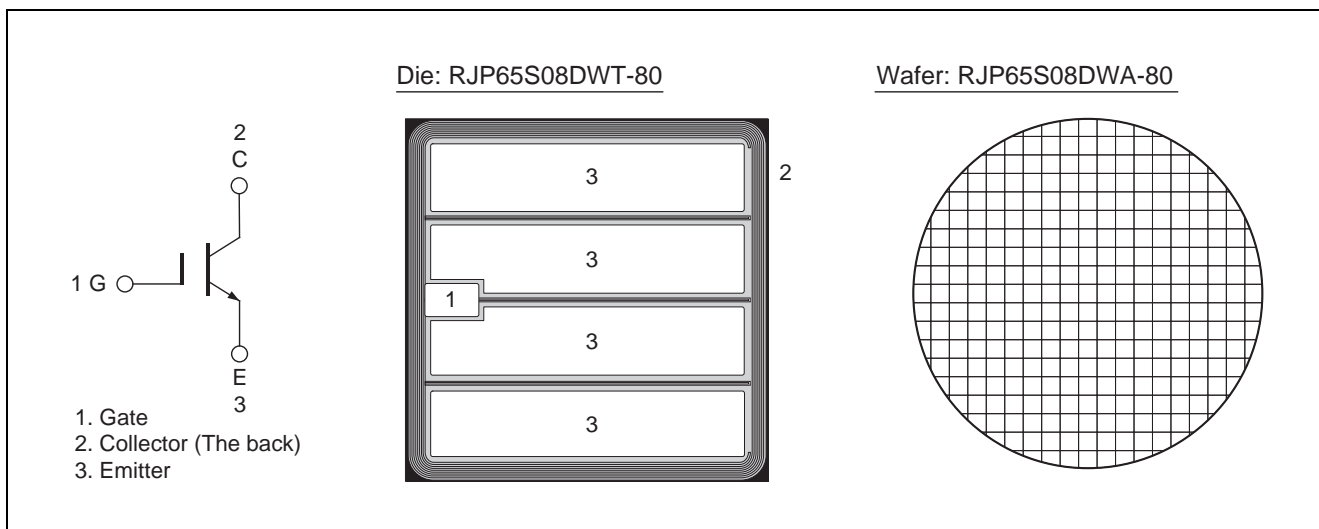
Rev.0.02

Aug 09, 2012

Features

- Low collector to emitter saturation voltage
 $V_{CE(sat)} = 1.6 \text{ V typ. (at } I_C = 200 \text{ A, } V_{GE} = 15 \text{ V, } T_a = 25^\circ\text{C)}$
- High speed Switching
- Short circuit withstands time (10 $\mu\text{s min.}$)

Outline



Absolute Maximum Ratings

($T_a = 25^\circ\text{C}$)

Item	Symbol	Ratings	Unit	
Collector to emitter voltage	V_{CES}	650	V	
Gate to emitter voltage	V_{GES}	± 30	V	
Collector current	$T_c = 25^\circ\text{C}$	I_C ^{Note1}	400	A
	$T_c = 100^\circ\text{C}$	I_C ^{Note1}	200	A
Junction temperature	T_j	150	$^\circ\text{C}$	

Notes: 1. This data is a regulated value in evaluation package.

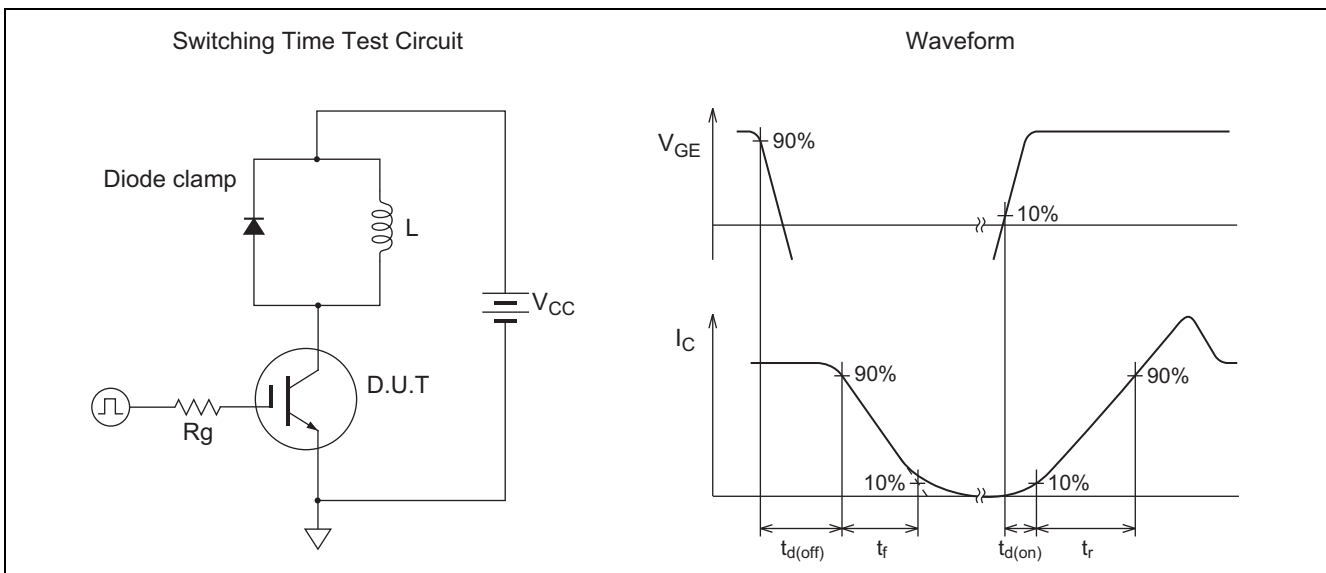
Electrical Characteristics (These data are an actual measurement value in evaluation package.)

(Ta = 25°C)

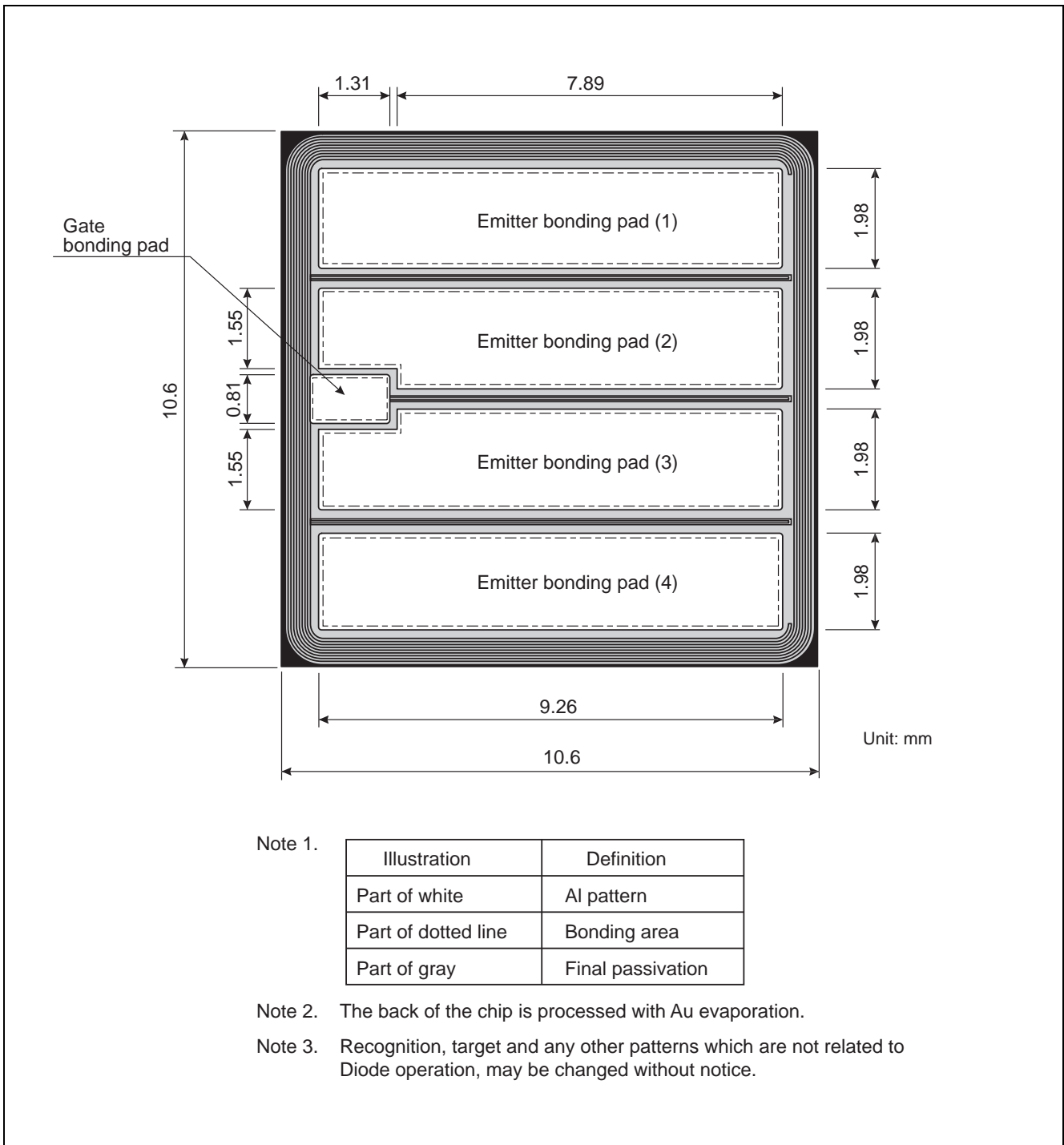
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Zero gate voltage collector current	I_{CES}	—	—	1	μA	$V_{CE} = 650 \text{ V}, V_{GE} = 0$
Gate to emitter leak current	I_{GES}	—	—	± 1	μA	$V_{GE} = \pm 30 \text{ V}, V_{CE} = 0$
Gate to emitter cutoff voltage	$V_{GE(off)}$	5.0	—	6.8	V	$V_{CE} = 10 \text{ V}, I_C = 4 \text{ mA}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	1.60	—	V	$I_C = 200 \text{ A}, V_{GE} = 15 \text{ V}$ ^{Note2}
Input capacitance	C_{ies}	—	17.0	—	nF	$V_{CE} = 25 \text{ V}$
Output capacitance	C_{oes}	—	0.7	—	nF	$V_{GE} = 0$
Reveres transfer capacitance	C_{res}	—	0.6	—	nF	$f = 1 \text{ MHz}$
Switching time	$t_{d(on)}$	—	120	—	ns	$V_{CC} = 300 \text{ V}$ ^{Note3} $I_C = 200 \text{ A}$ $V_{GE} = \pm 15 \text{ V}$ $R_g = 10 \Omega, T_C = 125 \text{ }^\circ\text{C}$ Inductive load
	t_r	—	130	—	ns	
	$t_{d(off)}$	—	600	—	ns	
	t_f	—	80	—	ns	
Short circuit withstand time	t_{sc}	10	—	—	μs	$V_{CC} \leq 360 \text{ V}, V_{GE} = 15 \text{ V}$ $T_C = 150 \text{ }^\circ\text{C}$

Notes: 2. Pulse test.

3. Switching time test circuit and waveform are shown below.



Die Dimension



Ordering Information

Orderable Part Number
RJP65S08DWA-80#W0
RJP65S08DWT-80#X0

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