

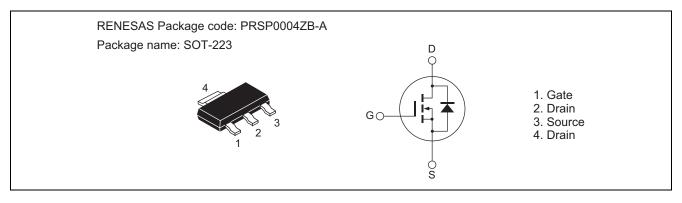
# RJK6036DP3-A0

600V - 2A - MOS FET High Speed Power Switching R07DS0841EJ0100 Rev.1.00 Jul 05, 2011

### Features

- Low on-resistance
- $R_{DS(on)} = 5.7 \ \Omega$  typ. (at  $I_D = 1 \ A$ ,  $V_{GS} = 10 \ V$ ,  $Ta = 25^{\circ}C$ )
- Low drive current
- High density mounting

#### Outline



## **Absolute Maximum Ratings**

 $(Ta = 25^{\circ}C)$ Symbol Ratings Unit ltem Drain to source voltage V<sub>DSS</sub> 600 V ±30 V Gate to source voltage  $V_{\text{GSS}}$ ID Note1 2 Drain current А I<sub>D (pulse)</sub>Note2 Drain peak current 4 А I<sub>DR</sub><sup>Note1</sup> 2 Body-drain diode reverse drain current А Note2 Body-drain diode reverse drain peak current 4 А I<sub>DR (pulse)</sub> Channel temperature 150 °C Tch °C Storage temperature Tstg -55 to +150

Notes: 1. Limited Tch max.. Value at  $Tc = 25^{\circ}C$ 

2. Pulse width limited by safe operating area.



## **Electrical Characteristics**

						$(Ta = 25^{\circ}C)$
Item	Symbol	Min	Тур	Max	Unit	Test conditions
Drain to source breakdown voltage	V <sub>(BR)DSS</sub>	600	—	—	V	$I_D = 10 \text{ mA}, V_{GS} = 0$
Zero gate voltage drain current	I <sub>DSS</sub>	_	—	1	μΑ	$V_{DS} = 600 \text{ V}, V_{GS} = 0$
Gate to source leak current	I <sub>GSS</sub>	_	_	±0.1	μΑ	$V_{GS} = \pm 30$ V, $V_{DS} = 0$
Gate to source cutoff voltage	V <sub>GS(off)</sub>	3.0	_	4.5	V	$V_{DS} = 10 \text{ V}, I_{D} = 1 \text{ mA}$
Static drain to source on state	R <sub>DS(on)</sub>	_	5.7	6.8	Ω	$I_D = 1 \text{ A}, V_{GS} = 10 \text{ V}^{\text{Note3}}$
resistance						
Input capacitance	Ciss	—	165	—	pF	V <sub>DS</sub> = 25 V
Output capacitance	Coss		20	—	pF	V <sub>GS</sub> = 0 f = 1 MHz
Reverse transfer capacitance	Crss	_	2.5	_	pF	
Turn-on delay time	t <sub>d(on)</sub>	_	12	_	ns	I <sub>D</sub> = 1 A
Rise time	tr	_	12		ns	$V_{GS} = 10 V$ $R_L = 300 \Omega$ $Rg = 10 \Omega$
Turn-off delay time	t <sub>d(off)</sub>	_	20		ns	
Fall time	t <sub>f</sub>	_	31		ns	
Body-drain diode forward voltage	$V_{DF}$	_	0.9	1.5	V	$I_F = 2 A, V_{GS} = 0^{Note3}$

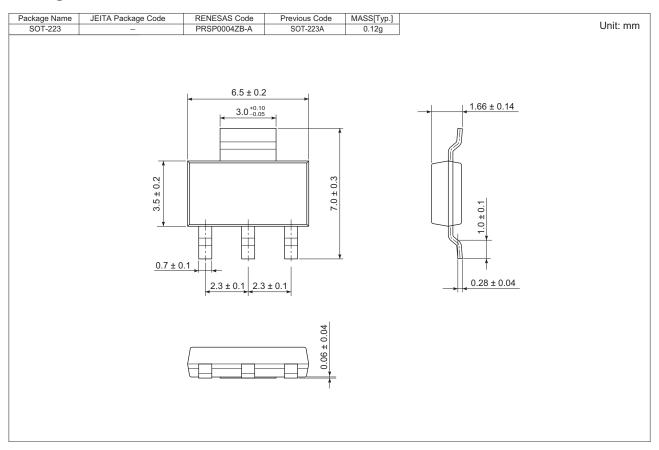
Notes: 3. Pulse test

4. This device is sensitive to electrostatic discharge.

It is recommended to adopt appropriate cautions when handling this product.



#### **Package Dimension**



### **Ordering Information**

Orderable Part Number	Quantity	Shipping Container
RJK6036DP3-A0#J2	3000 pcs	Taping



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Renesas Electronics America Inc.

2880 Scott Boulevard Santa Clara, CA 95050-2554, U.S.A.

Tel: +1-408-588-6000, Fax: +1-408-588-6130

Renesas Electronics Canada Limited

1101 Nicholson Road, Newmarket, Ontario L3Y 9C3, Canada

Tei: +1-905-898-5441, Fax: +1-905-898-3220

Renesas Electronics Europe Limited

Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K

Tei: +44-1628-585-100, Fax: +444-1628-585-900

Renesas Electronics Europe GmbH

Arcadiastrasse 10, 40472 Disseldorf, Germany

Tei: +49-211-65030, Fax: +449-11-6503-1327

Renesas Electronics (Shanghal) Co., Ltd.

Th Fibor, Quantum Plaza, No.27 ZhiChunLu Haidian District, Beijing 100083, P.R.China

Tei: +86-10-8235-1155, Fax: +862-10-8235-7679

Renesas Electronics (Shanghal) Co., Ltd.

Unit 1601-1613, 16/F., Tower 2, Grand Century Place, 193 Prince Edward Road West, Mongkok, Kowloon, Hong Kong

Tei: +862-2886-9318, Fax: +852-2886-9022/9044

Penesas Electronics Taiwan Co., Ltd.

Tash, No, 33, Fu Shing North Road, Taipei, Taiwan

Tei: +862-28175-9800, Fax: +862-28175-9870

Renesas Electronics Singapore Ple. Ld.

1 harbourfront Avenue, 406-10, keppel Bay Tower, Singapore 098632

Tei: +805-28175-9800, Fax: +862-28175-98070

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