

# RJK6036DP3-A0

600V - 2A - MOS FET  
High Speed Power Switching

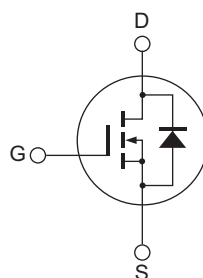
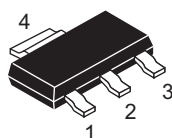
R07DS0841EJ0100  
Rev.1.00  
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## Features

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

## Outline

RENESAS Package code: PRSP0004ZB-A  
Package name: SOT-223



1. Gate
2. Drain
3. Source
4. Drain

## Absolute Maximum Ratings

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

Item	Symbol	Ratings	Unit
Drain to source voltage	$V_{DSS}$	600	V
Gate to source voltage	$V_{GSS}$	$\pm 30$	V
Drain current	$I_D$ <sup>Note1</sup>	2	A
Drain peak current	$I_{D(pulse)}$ <sup>Note2</sup>	4	A
Body-drain diode reverse drain current	$I_{DR}$ <sup>Note1</sup>	2	A
Body-drain diode reverse drain peak current	$I_{DR(pulse)}$ <sup>Note2</sup>	4	A
Channel temperature	$T_{ch}$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

- Notes: 1. Limited  $T_{ch}$  max.. Value at  $T_c = 25^\circ\text{C}$   
2. Pulse width limited by safe operating area.

## Electrical Characteristics

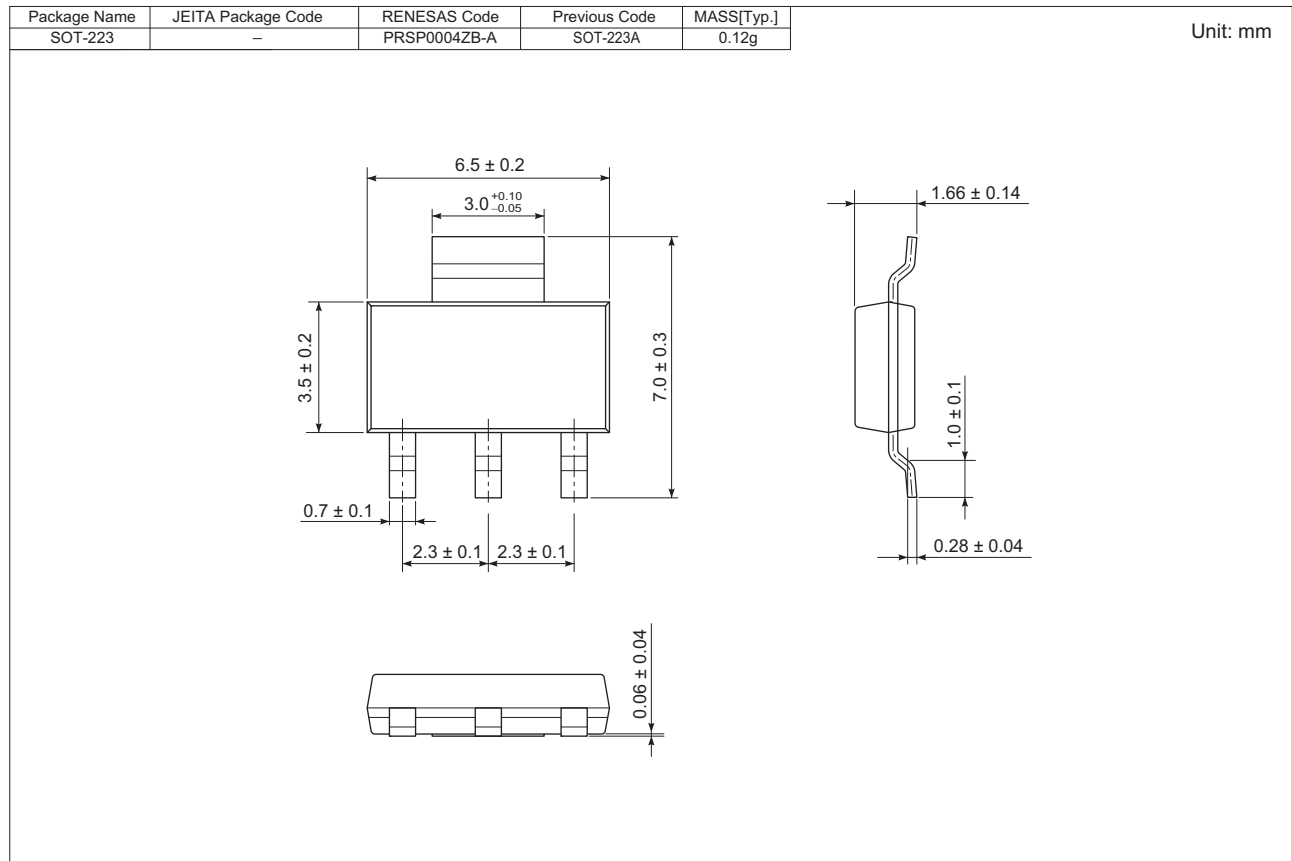
(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	600	—	—	V	$I_D = 10 \text{ mA}$ , $V_{GS} = 0$
Zero gate voltage drain current	$I_{DSS}$	—	—	1	$\mu\text{A}$	$V_{DS} = 600 \text{ V}$ , $V_{GS} = 0$
Gate to source leak current	$I_{GSS}$	—	—	$\pm 0.1$	$\mu\text{A}$	$V_{GS} = \pm 30 \text{ V}$ , $V_{DS} = 0$
Gate to source cutoff voltage	$V_{GS(off)}$	3.0	—	4.5	V	$V_{DS} = 10 \text{ V}$ , $I_D = 1 \text{ mA}$
Static drain to source on state resistance	$R_{DS(on)}$	—	5.7	6.8	$\Omega$	$I_D = 1 \text{ A}$ , $V_{GS} = 10 \text{ V}$ <sup>Note3</sup>
Input capacitance	$C_{iss}$	—	165	—	pF	$V_{DS} = 25 \text{ V}$
Output capacitance	$C_{oss}$	—	20	—	pF	$V_{GS} = 0$
Reverse transfer capacitance	$C_{rss}$	—	2.5	—	pF	$f = 1 \text{ MHz}$
Turn-on delay time	$t_{d(on)}$	—	12	—	ns	$I_D = 1 \text{ A}$
Rise time	$t_r$	—	12	—	ns	$V_{GS} = 10 \text{ V}$
Turn-off delay time	$t_{d(off)}$	—	20	—	ns	$R_L = 300 \Omega$
Fall time	$t_f$	—	31	—	ns	$R_g = 10 \Omega$
Body-drain diode forward voltage	$V_{DF}$	—	0.9	1.5	V	$I_F = 2 \text{ A}$ , $V_{GS} = 0$ <sup>Note3</sup>

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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