RJK4036DP3-A0

400V - 3A - MOS FET
High Speed Power Switching

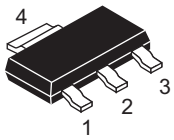
R07DS0838EJ0100
Rev.1.00
Jul 05, 2011

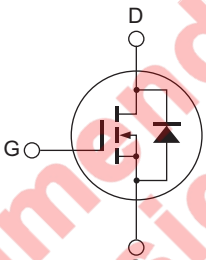
Features

- Low on-resistance
  $R_{DS(on)}$ = 2.4 Ω typ. (at I_D = 1.5 A, V_{GS} = 10 V, Ta = 25°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

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V_{DSS}	400	V
Gate to source voltage	V_{GSS}	±30	V
Drain current	I_D Note1	3	A
Drain peak current	$I_{D\ (pulse)}$ Note2	6	A
Body-drain diode reverse drain current	I_{DR} Note1	3	A
Body-drain diode reverse drain peak current	$I_{DR\ (pulse)}$ Note2	6	A
Channel temperature	Tch	150	°C
Storage temperature	Tstg	–55 to +150	°C

Notes: 1. Limited by Tch max.. Value at Tc = 25°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	$V_{(BR)DSS}$	400	—	—	V	I_D = 10 mA, V_{GS} = 0
Zero gate voltage drain current	I_{DSS}	—	—	1	μA	V_{DS} = 400 V, V_{GS} = 0
Gate to source leak current	I_{GSS}	—	—	±0.1	μA	V_{GS} = ±30 V, V_{DS} = 0
Gate to source cutoff voltage	$V_{GS(off)}$	3.0	—	4.5	V	V_{DS} = 10 V, I_D = 1 mA
Static drain to source on state resistance	$R_{DS(on)}$	—	2.4	2.9	Ω	I_D = 1.5 A, V_{GS} = 10 V Note3
Input capacitance	Ciss	—	165	—	pF	V_{DS} = 25 V V_{GS} = 0 f = 1 MHz
Output capacitance	Coss	—	25	—	pF	
Reverse transfer capacitance	Crss	—	3.5	—	pF	
Turn-on delay time	$t_{d(on)}$	—	11	—	ns	I_D = 1.5 A V_{GS} = 10 V R_L = 133 Ω Rg = 10 Ω
Rise time	t_r	—	12	—	ns	
Turn-off delay time	$t_{d(off)}$	—	21	—	ns	
Fall time	t_f	—	17	—	ns	
Body-drain diode forward voltage	V_{DF}	—	0.9	1.5	V	I_F = 3 A, V_{GS} = 0 Note3

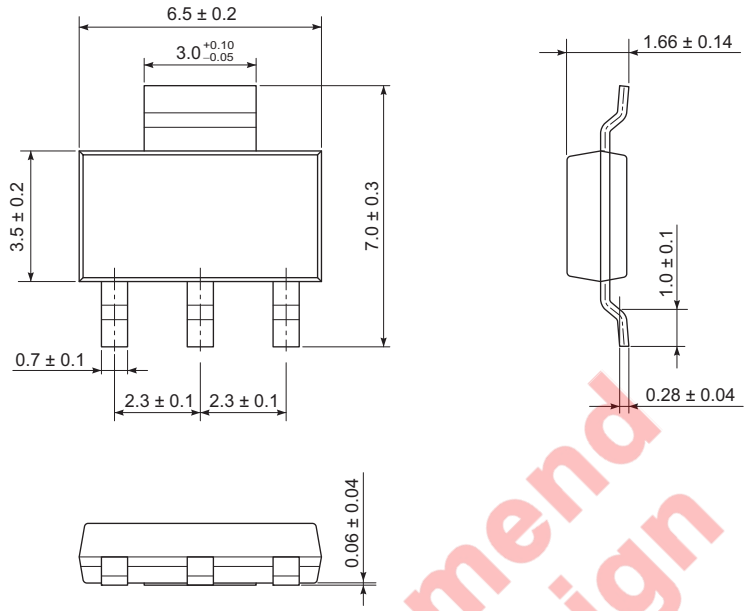
Notes: 3. Pulse test

4. This device is sensitive to electrostatic discharge.
   It is recommended to adopt appropriate cautions when handling this product.

Package Dimension

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
SOT-223	–	PRSP0004ZB-A	SOT-223A	0.12g

Unit: mm



Ordering Information

Orderable Part Number	Quantity	Shipping Container
RJK4036DP3-A0#J2	3000 pcs	Taping

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