2SK2568

Silicon N Channel MOS FET

REJ03G1017-0300
(Previous: ADE-208-1363)
Rev.3.00
Sep 07, 2005

Application

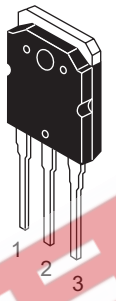
High speed power switching

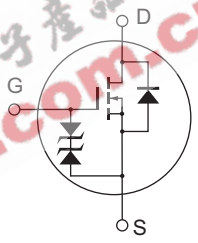
Features

- Low on-resistance
- High speed switching
- Low drive current
- Suitable for switching regulator and DC-DC converter

Outline

RENESAS Package code: PRSS0004ZE-A
(Package name: TO-3P)





1. Gate
2. Drain
   (Flange)
3. Source

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V_{DSS}	500	V
Gate to source voltage	V_{GSS}	±30	V
Drain current	I_D*[2]	12	A
Drain peak current	$I_{D(pulse)}$*[1]	48	A
Body to drain diode reverse drain current	I_{DR}*[2]	12	A
Channel dissipation	Pch*[2]	100	W
Channel temperature	Tch	150	°C
Storage temperature	Tstg	–55 to +150	°C

Notes: 1. PW ≤ 10 µs, duty cycle ≤ 1 %
2. Value at Tc = 25°C

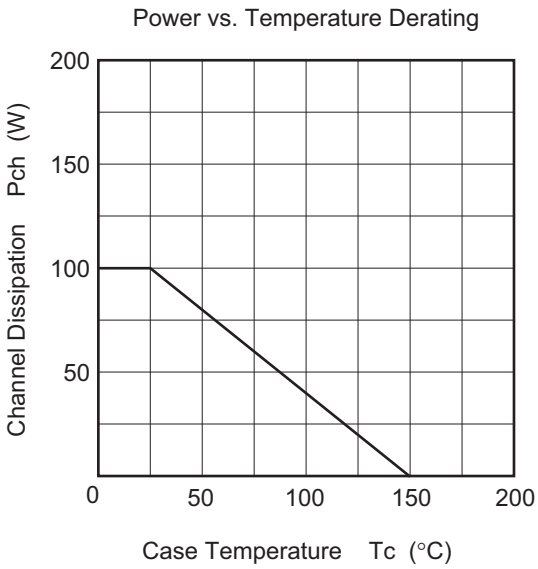
Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	500	—	—	V	I_D = 10 mA, V_{GS} = 0
Gate to source breakdown voltage	$V_{(BR)GSS}$	±30	—	—	V	I_G = ±100 µA, V_{DS} = 0
Gate to source leak current	I_{GSS}	—	—	±10	µA	V_{GS} = ±25 V, V_{DS} = 0
Zero gate voltage drain current	I_{DSS}	—	—	250	µA	V_{DS} = 400 V, V_{GS} = 0
Gate to source cutoff voltage	$V_{GS(off)}$	2.0	—	3.0	V	I_D = 1 mA, V_{DS} = 10 V
Static drain to source on state resistance	$R_{DS(on)}$	—	0.5	0.6	Ω	I_D = 6 A, V_{GS} = 10 V*[1]
Forward transfer admittance	$\|y_{fs}\|$	6.0	10	—	S	I_D = 6 A, V_{DS} = 10 V*[1]
Input capacitance	Ciss	—	1560	—	pF	V_{DS} = 10 V, V_{GS} = 0, f = 1 MHz
Output capacitance	Coss	—	450	—	pF	
Reverse transfer capacitance	Crss	—	72	—	pF	
Turn-on delay time	$t_{d(on)}$	—	22	—	ns	I_D = 6 A, V_{GS} = 10 V, R_L = 5 Ω
Rise time	t_r	—	78	—	ns	
Turn-off delay time	$t_{d(off)}$	—	140	—	ns	
Fall time	t_f	—	60	—	ns	
Body to drain diode forward voltage	V_{DF}	—	1.1	—	V	I_F = 12 A, V_{GS} = 0
Body to drain diode reverse recovery time	t_{rr}	—	105	—	ns	I_F = 12 A, V_{GS} = 0 di_F / dt = 100 A / µs

Note: 3. Pulse Test

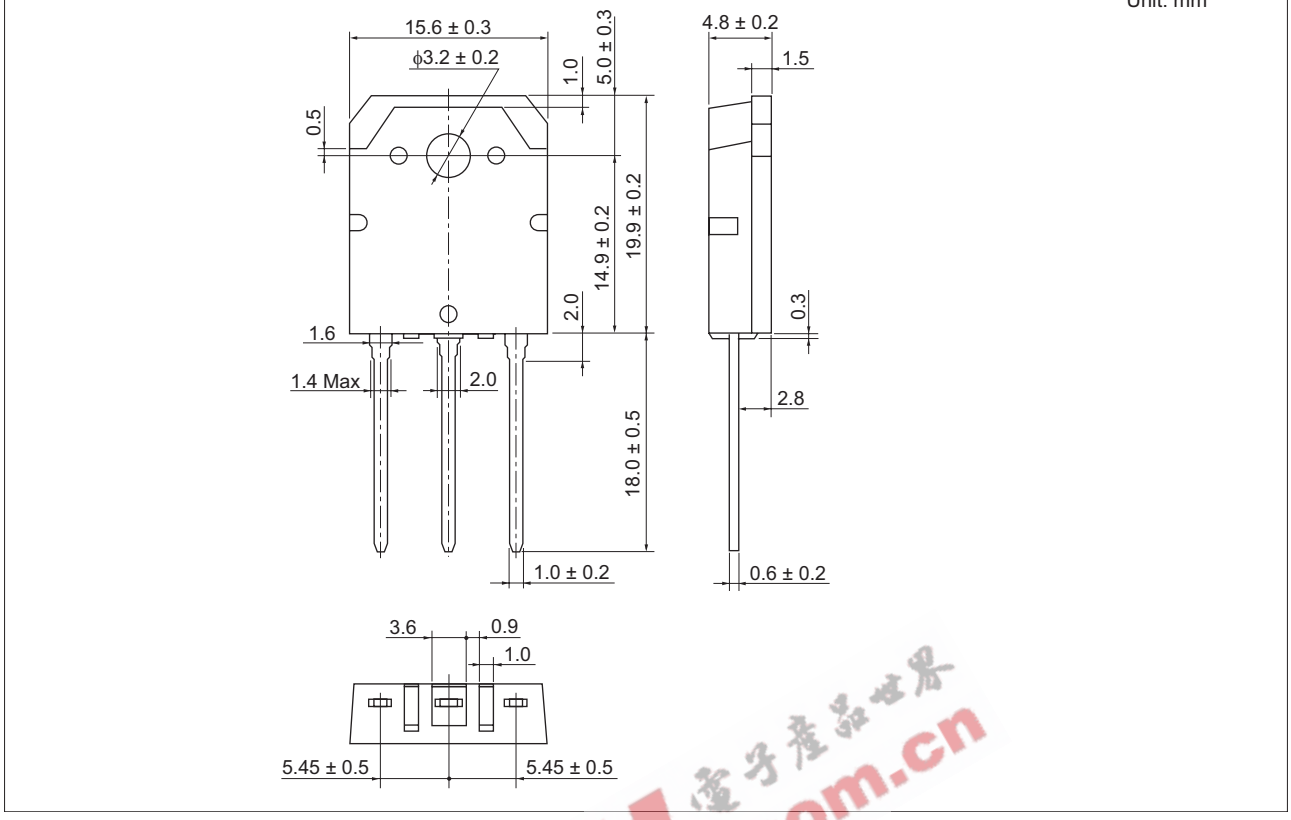
Main Characteristics



Package Dimensions

JEITA Package Code	RENESAS Code	Package Name	MASS[Typ.]
SC-65	PRSS0004ZE-A	TO-3P / TO-3PV	5.0g

Unit: mm



Ordering Information

Part Name	Quantity	Shipping Container
2SK2568-E	360 pcs	Box (Tube)

Note: For some grades, production may be terminated. Please contact the Renesas sales office to check the state of production before ordering the product.

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http://www.renesas.com

Refer to "**http://www.renesas.com/en/network**" for the latest and detailed information.

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