

2SK2114

Silicon N Channel MOS FET

REJ03G0998-0200

(Previous: ADE-208-1346)

Rev.2.00 Sep 07, 2005

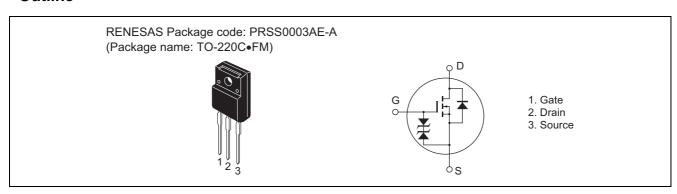
Application

High speed power switching

Features

- Low on-resistance
- High speed switching
- Low drive current
- No secondary breakdown
- Suitable for Switching regulator

Outline



Absolute Maximum Ratings

 $(Ta = 25^{\circ}C)$

Item	Symbol	Ratings	Unit
Drain to source voltage	V _{DSS}	450	V
Gate to source voltage	V _{GSS}	±30	V
Drain current	I _D	5	Α
Drain peak current	I _{D(pulse)} *1	20	А
Body to drain diode reverse drain current	I _{DR}	5	Α
Channel dissipation	Pch*2	35	W
Channel temperature	Tch	150	°C
Storage temperature	Tstg	-55 to +150	°C

Notes: 1. PW \leq 10 μ s, duty cycle \leq 1 %

2. Value at Tc = 25°C

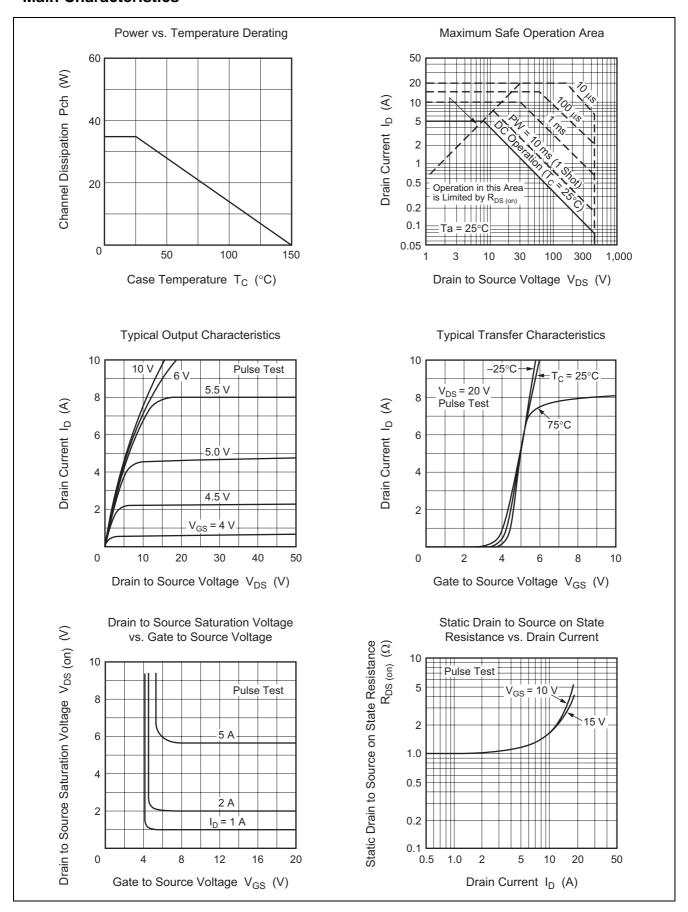
Electrical Characteristics

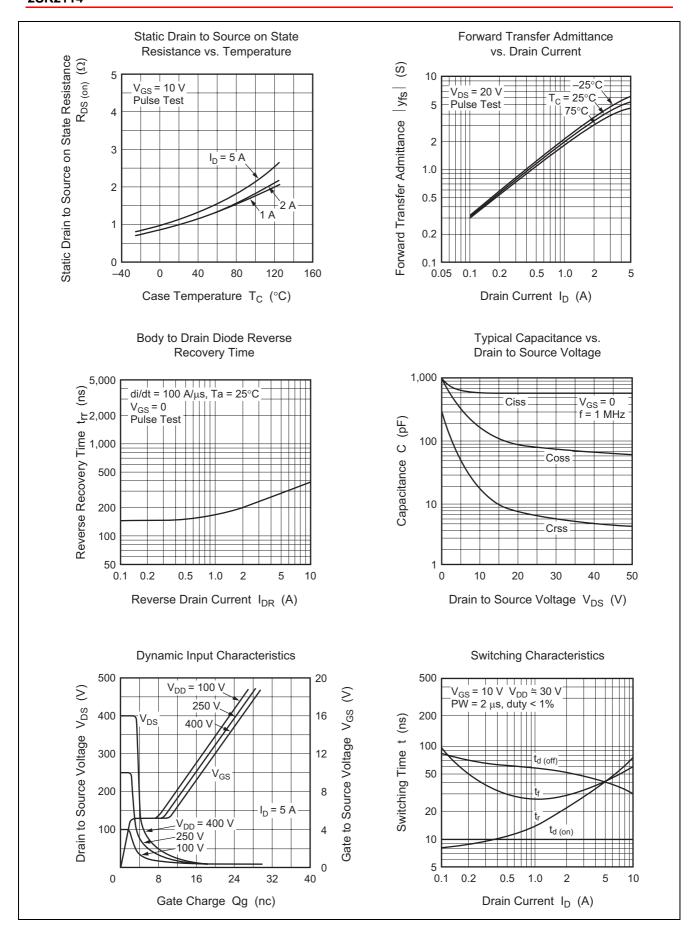
 $(Ta = 25^{\circ}C)$

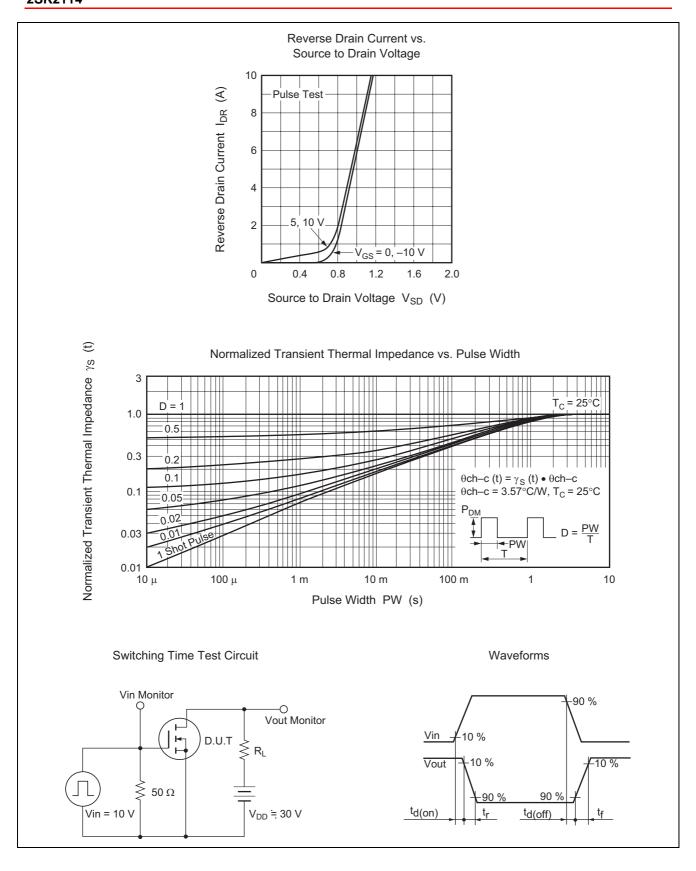
Item	Symbol	Min	Тур	Max	Unit	Test conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	450	_	_	V	$I_D = 10 \text{ mA}, V_{GS} = 0$
Gate to source breakdown voltage	$V_{(BR)GSS}$	±30	_	_	V	$I_G = \pm 100 \ \mu A, \ V_{DS} = 0$
Gate to source leak current	I _{GSS}	_	_	±10	μΑ	$V_{GS} = \pm 25 \text{ V}, V_{DS} = 0$
Zero gate voltage drain current	I _{DSS}	_	_	250	μΑ	$V_{DS} = 360 \text{ V}, V_{GS} = 0$
Gate to source cutoff voltage	$V_{GS(off)}$	2.0	_	3.0	V	$I_D = 1 \text{ mA}, V_{DS} = 10 \text{ V}$
Static drain to source on state resistance	R _{DS(on)}	_	1.0	1.4	Ω	$I_D = 2.5 \text{ A}, V_{GS} = 10 \text{ V}^{*3}$
Forward transfer admittance	y _{fs}	2.5	4.0	_	S	$I_D = 2.5 \text{ A}, V_{DS} = 10 \text{ V}^{*3}$
Input capacitance	Ciss	_	640	_	pF	$V_{DS} = 10 \text{ V}, V_{GS} = 0,$
Output capacitance	Coss	_	160	_	pF	f = 1 MHz
Reverse transfer capacitance	Crss	_	20	_	pF	
Turn-on delay time	t _{d(on)}	_	10	_	ns	$I_D = 2.5 \text{ A}, V_{GS} = 10 \text{ V},$
Rise time	t _r	_	25	_	ns	$R_L = 12 \Omega$
Turn-off delay time	t _{d(off)}	_	50	_	ns	
Fall time	t _f	_	30	_	ns	
Body to drain diode forward voltage	V_{DF}	_	0.95	_	V	$I_F = 5 \text{ A}, V_{GS} = 0$
Body to drain diode reverse	t _{rr}	_	300	_	ns	$I_F = 5 \text{ A}, V_{GS} = 0,$
recovery time						$di_{F} / dt = 100 A / \mu s$

Note: 3. Pulse Test

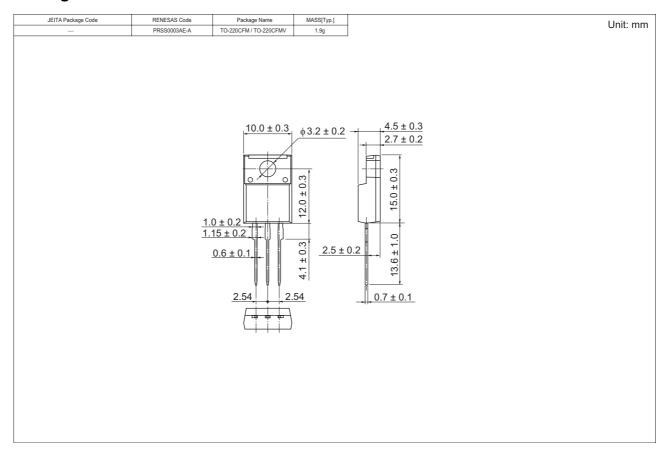
Main Characteristics







Package Dimensions



Ordering Information

Part Name	Quantity	Shipping Container
2SK2096-E	30 pcs	Plastic magazine

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