

2SK2529

Silicon N Channel MOS FET

REJ03G1014-0800

(Previous: ADE-208-356F)

Rev.8.00 Sep 07, 2005

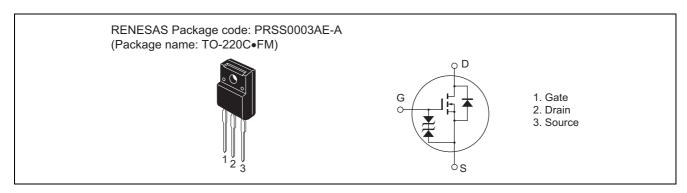
Application

High speed power switching

Features

- Low on-resistance
- $R_{DS(on)} = 7 \text{ m}\Omega \text{ typ.}$
- High speed switching
- 4 V gate drive device can be driven from 5 V source

Outline



Absolute Maximum Ratings

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

Item	Symbol	Ratings	Unit
Drain to source voltage	V_{DSS}	60	V
Gate to source voltage	V_{GSS}	±20	V
Drain current	I _D	50	Α
Drain peak current	I _{D(pulse)} *1	200	А
Body to drain diode reverse drain current	I _{DR}	50	Α
Avalanche current	I _{AP} *3	45	Α
Avalanche energy	E _{AR} *3	174	mJ
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

3. Value at Tch = 25°C, Rg \geq 50 Ω

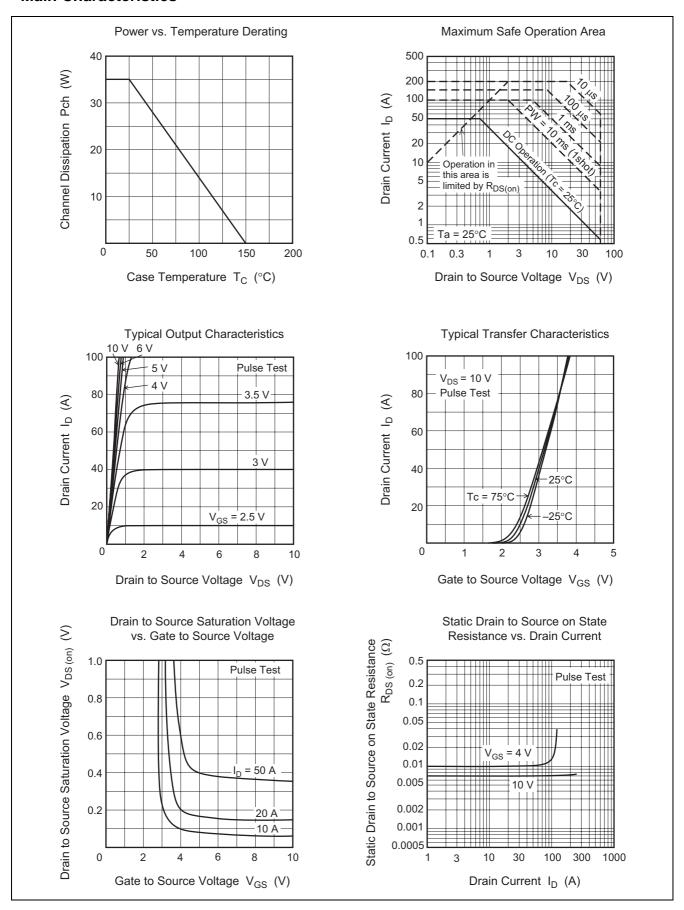
Electrical Characteristics

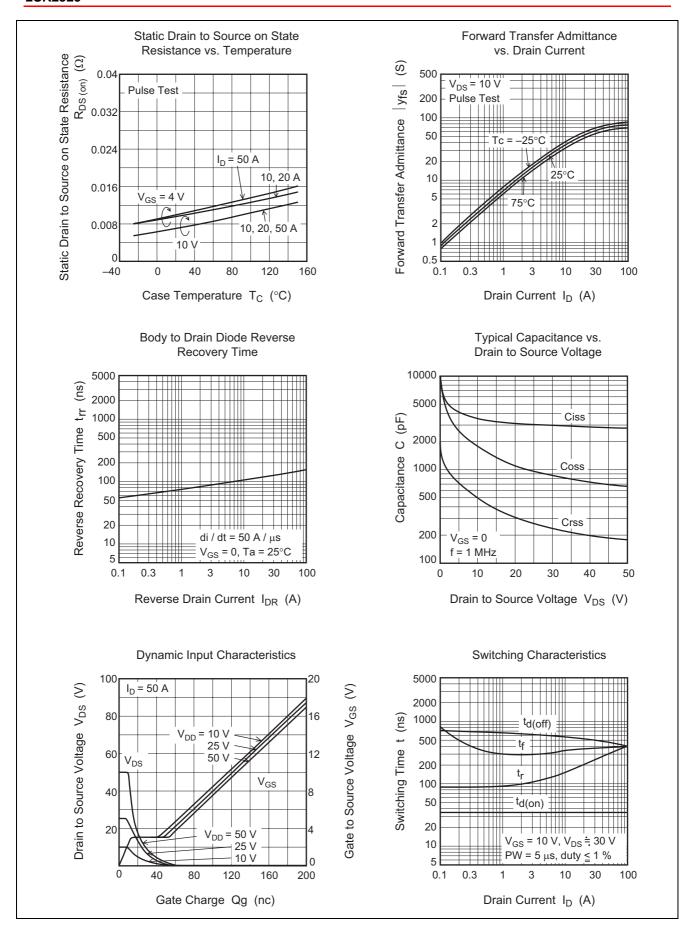
 $(\mathrm{Ta}=25^{\circ}\mathrm{C})$

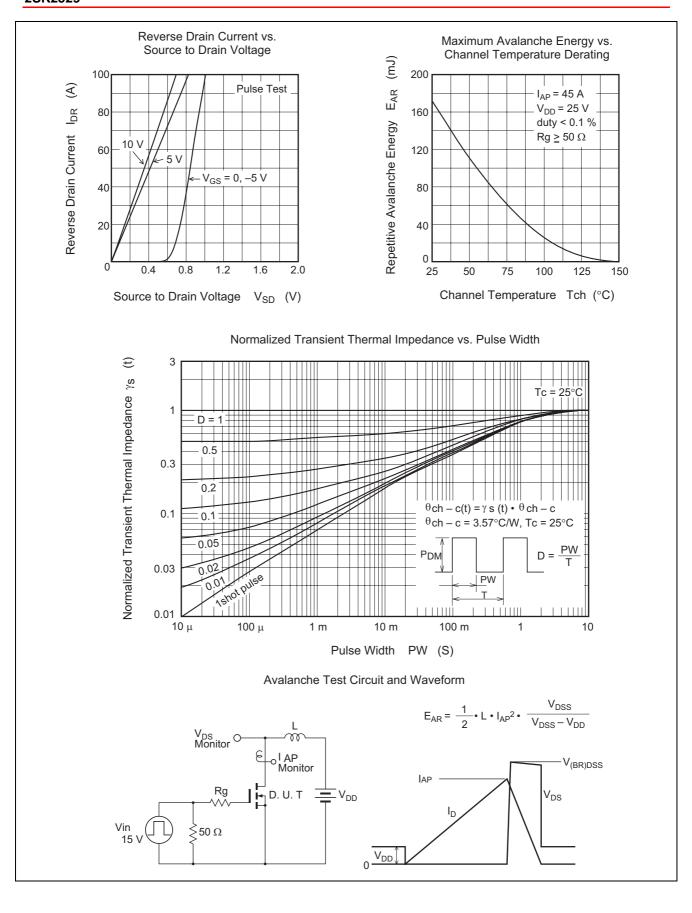
Item	Symbol	Min	Тур	Max	Unit	Test Conditions	
Drain to source breakdown voltage	$V_{(BR)DSS}$	60	_	_	V	$I_D = 10 \text{ mA}, V_{GS} = 0$	
Gate to source breakdown voltage	$V_{(BR)GSS}$	±20	_	_	V	$I_G = \pm 100 \ \mu A, \ V_{DS} = 0$	
Gate to source leak current	I_{GSS}	_	_	±10	μΑ	$V_{GS} = \pm 16 \text{ V}, V_{DS} = 0$	
Zero gate voltage drain current	I _{DSS}	_	_	10	μΑ	$V_{DS} = 60 \text{ V}, V_{GS} = 0$	
Gate to source cutoff voltage	$V_{GS(off)}$	1.0	_	2.0	V	$I_D = 1 \text{ mA}, V_{DS} = 10 \text{ V}$	
Static drain to source on state	R _{DS(on)}	_	7	10	mΩ	$I_D = 25 \text{ A}, V_{GS} = 10 \text{ V}^{*4}$	
resistance		_	10	16	mΩ	$I_D = 25 \text{ A}, V_{GS} = 4 \text{ V}^{*4}$	
Forward transfer admittance	y _{fs}	35	55	_	S	$I_D = 25 \text{ A}, V_{DS} = 10 \text{ V}^{*4}$	
Input capacitance	Ciss	_	3550	_	pF	$V_{DS} = 10 \text{ V}, V_{GS} = 0,$	
Output capacitance	Coss	_	1760	_	pF	f = 1 MHz	
Reverse transfer capacitance	Crss	_	500	_	pF	1	
Turn-on delay time	t _{d(on)}	_	35	_	ns	I _D = 25 A, V _{GS} = 10 V,	
Rise time	t _r	_	230	_	ns	$R_L = 1.2 \Omega$	
Turn-off delay time	t _{d(off)}	_	470	_	ns	1	
Fall time	t _f	_	360	_	ns		
Body to drain diode forward voltage	V_{DF}	_	0.85	_	V	$I_F = 50 \text{ A}, V_{GS} = 0$	
Body to drain diode reverse recovery time	t _{rr}	_	135	_	ns	$I_F = 50 \text{ A}, V_{GS} = 0$ $di_F / dt = 50 \text{ A} / \mu \text{s}$	

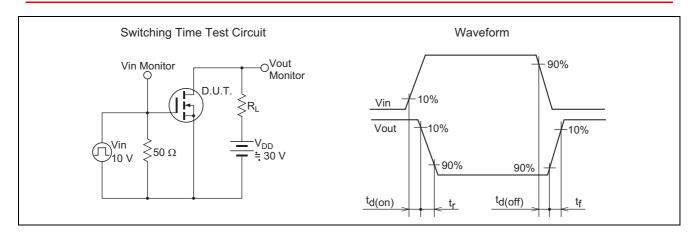
Note: 4. Pulse Test

Main Characteristics

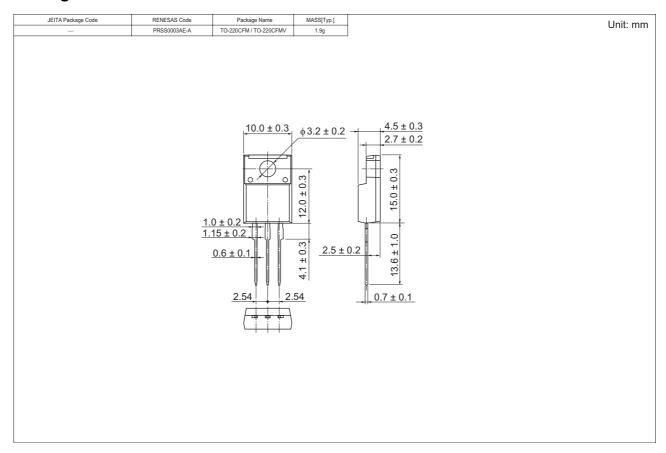








Package Dimensions



Ordering Information

Part Name	Quantity	Shipping Container
2SK2529-E	50 pcs	Plastic magazine

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