

2SK2955

Silicon N Channel MOS FET High Speed Power Switching

REJ03G1055-0400

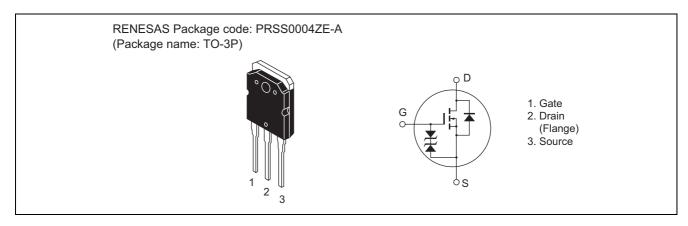
(Previous: ADE-208-564B)

Rev.4.00 Sep 07, 2005

Features

- Low on-resistance $R_{DS} = 0.010 \Omega$ 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	45	А	
Drain peak current	I _{D(pulse)} Note1	180	А	
Body-drain diode reverse drain current	I _{DR}	45	А	
Avalanche current	I _{AP} Note3	45	А	
Avalanche energy	E _{AR} Note3	173	mJ	
Channel dissipation	Pch Note2	100	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

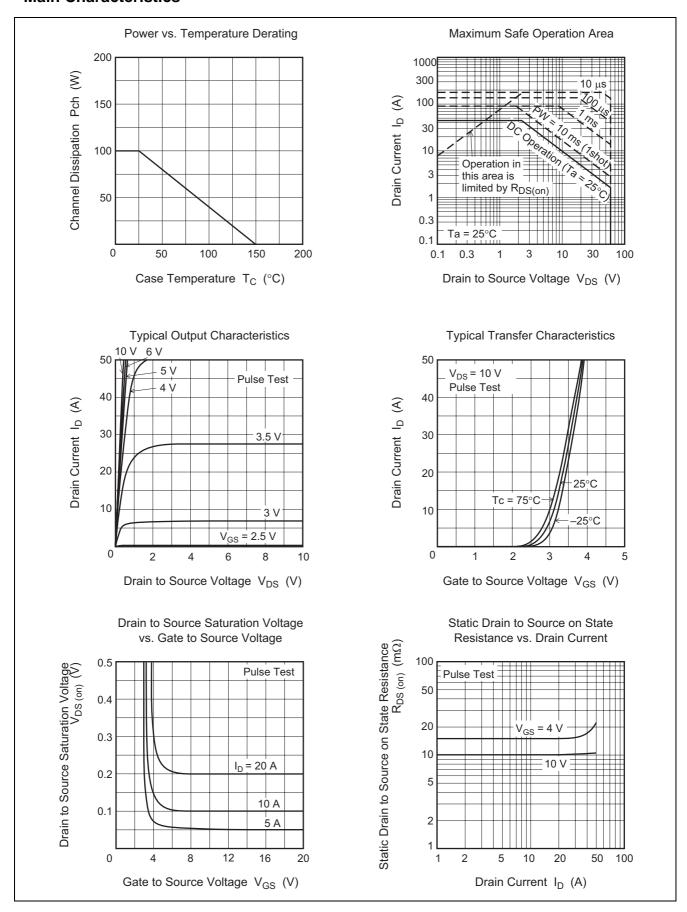
Electrical Characteristics

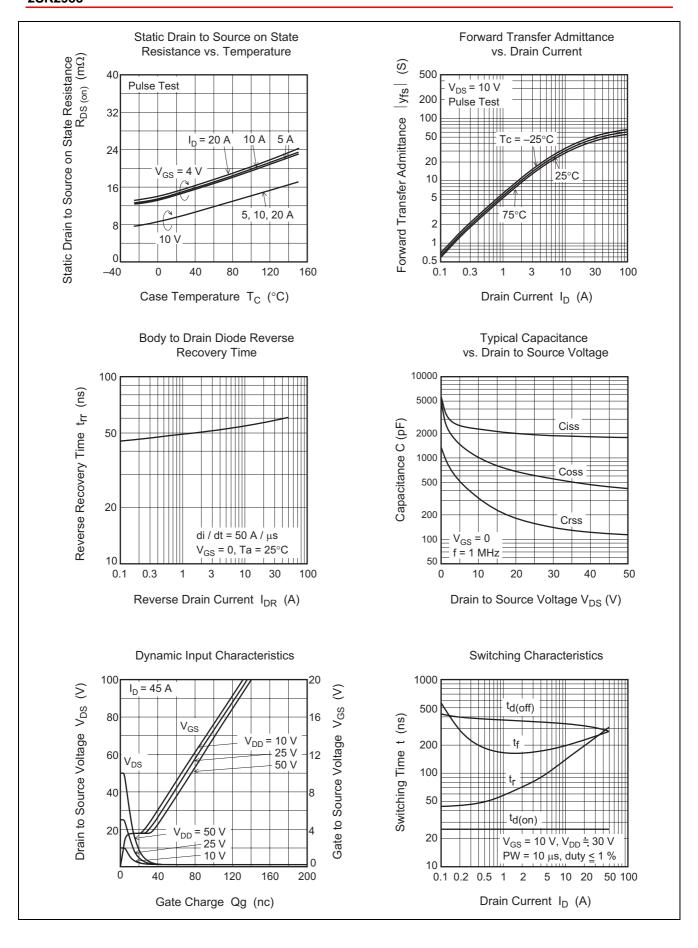
 $(Ta = 25^{\circ}C)$

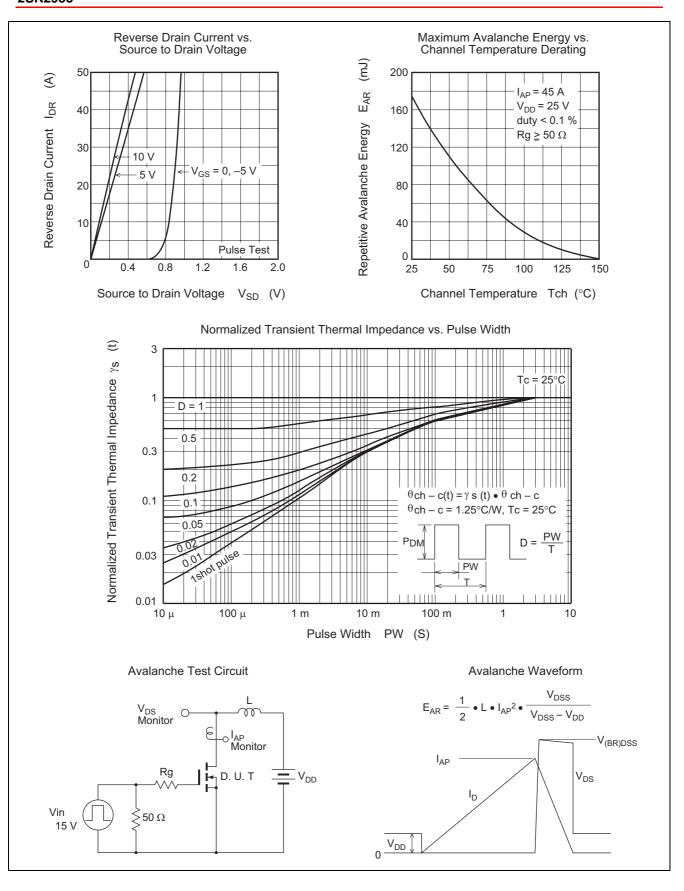
Item	Symbol	Min	Тур	Max	Unit	Test Conditions
Drain to source breakdown voltage	V _{(BR)DSS}	60	_	_	V	$I_D = 10 \text{ mA}, V_{GS} = 0$
Gate to source breakdown voltage	V _{(BR)GSS}	±20	_	_	V	$I_G = \pm 100 \ \mu A, \ V_{DS} = 0$
Gate to source leak current	I _{GSS}	_	_	±10	μΑ	$V_{GS} = \pm 16 \text{ V}, V_{DS} = 0$
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)}	1.5	_	2.5	V	I _D = 1 mA, V _{DS} = 10 V
Static drain to source on state	R _{DS(on)}	_	0.010	0.013	Ω	$I_D = 20 \text{ A}, V_{GS} = 10 \text{ V}^{\text{Note4}}$
resistance	R _{DS(on)}		0.015	0.025	Ω	$I_D = 20 \text{ A}, V_{GS} = 4 \text{ V}^{\text{Note4}}$
Forward transfer admittance	y _{fs}	24	40	_	S	I _D = 20 A, V _{DS} = 10 V Note4
Input capacitance	Ciss		2200	_	pF	$V_{DS} = 10 \text{ V}, V_{GS} = 0,$
Output capacitance	Coss		1050	_	pF	f = 1 MHz
Reverse transfer capacitance	Crss		320	_	pF	
Turn-on delay time	t _{d(on)}	_	25	_	ns	I _D = 20 A, V _{GS} = 10 V,
Rise time	t _r	_	200	_	ns	$R_L = 1.5 \Omega$
Turn-off delay time	t _{d(off)}	_	320	_	ns	
Fall time	t _f	_	240	_	ns	
Body-drain diode forward voltage	V_{DF}	_	0.95	_	V	$I_F = 45 \text{ A}, V_{GS} = 0$
Body-drain diode reverse recovery time	t _{rr}	_	60	_	ns	$I_F = 45 \text{ A}, V_{GS} = 0$ diF/ dt = 50 A/ μ s

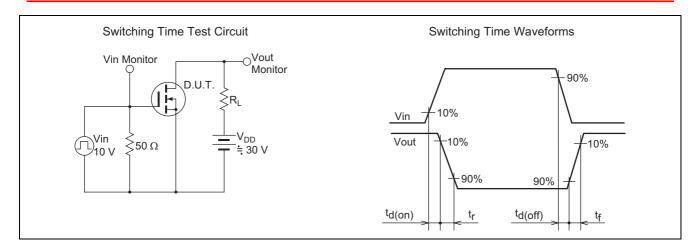
Note: 4. Pulse test

Main Characteristics

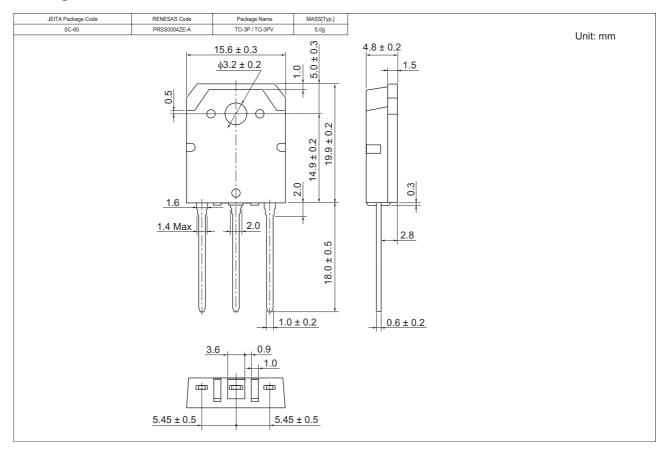








Package Dimensions



Ordering Information

Part Name	Quantity	Shipping Container
2SK2955-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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