

2SK1317

Silicon N Channel MOS FET

REJ03G0929-0200

(Previous: ADE-208-1268)

Rev.2.00 Sep 07, 2005

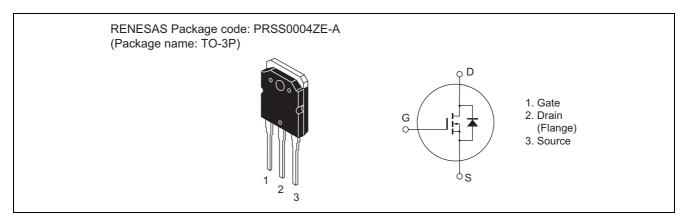
Application

High speed power switching

Features

- High breakdown voltage $V_{DSS} = 1500 \text{ V}$
- High speed switching
- Low drive current
- No secondary breakdown
- Suitable for switching regulator, DC-DC converter and motor driver

Outline



Absolute Maximum Ratings

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

Item	Symbol	Ratings	Unit
Drain to source voltage	V_{DSS}	1500	V
Gate to source voltage	V_{GSS}	±20	V
Drain current	I _D	2.5	А
Drain peak current	I _{D(pulse)} *1	7	А
Body to drain diode reverse drain current	I _{DR}	2.5	А
Channel dissipation	Pch ^{*2}	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 $T_C = 25$ °C

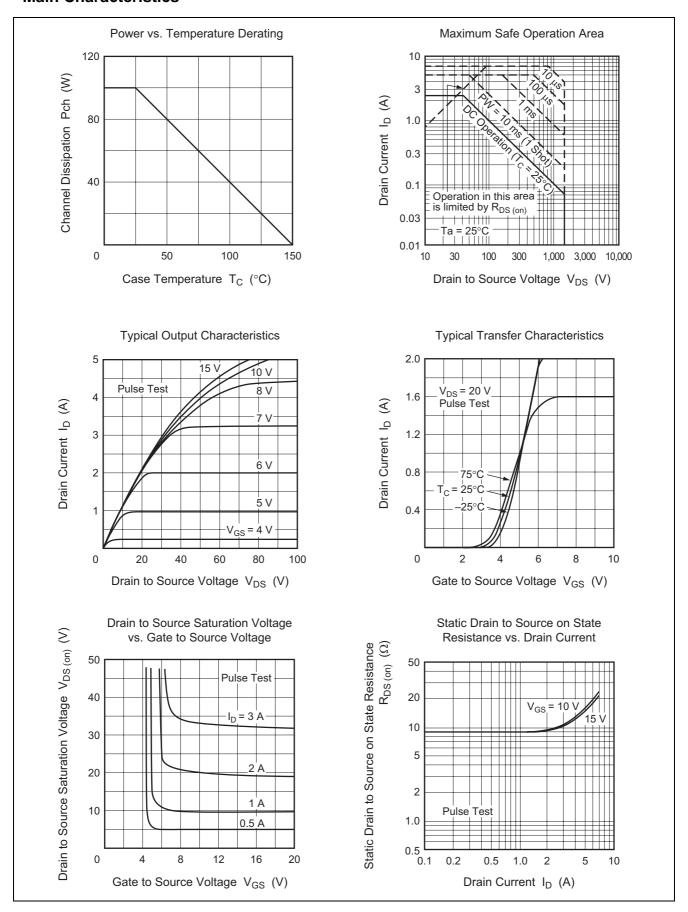
Electrical Characteristics

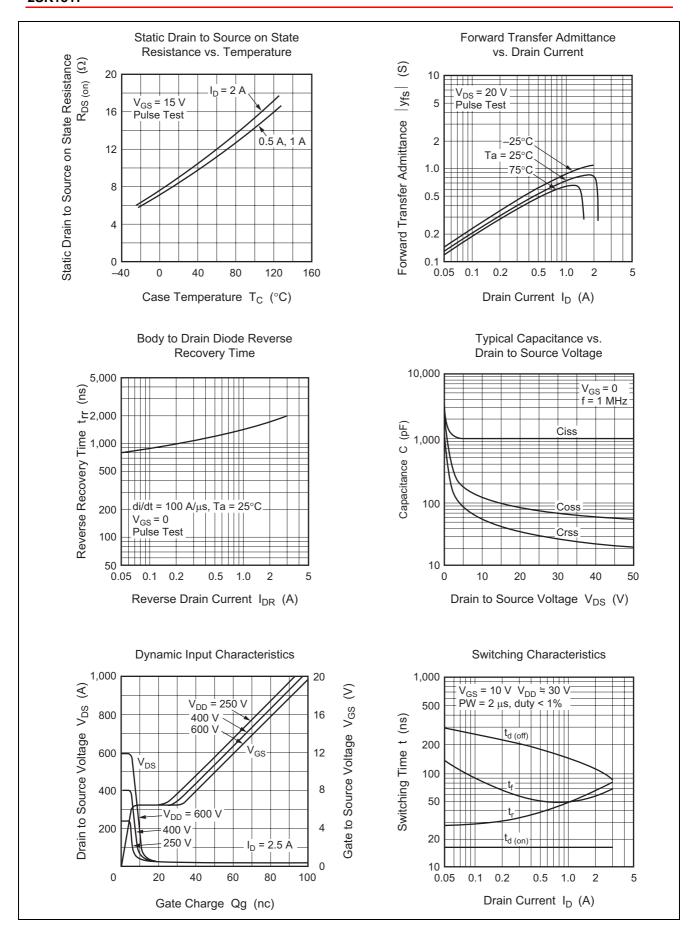
 $(Ta = 25^{\circ}C)$

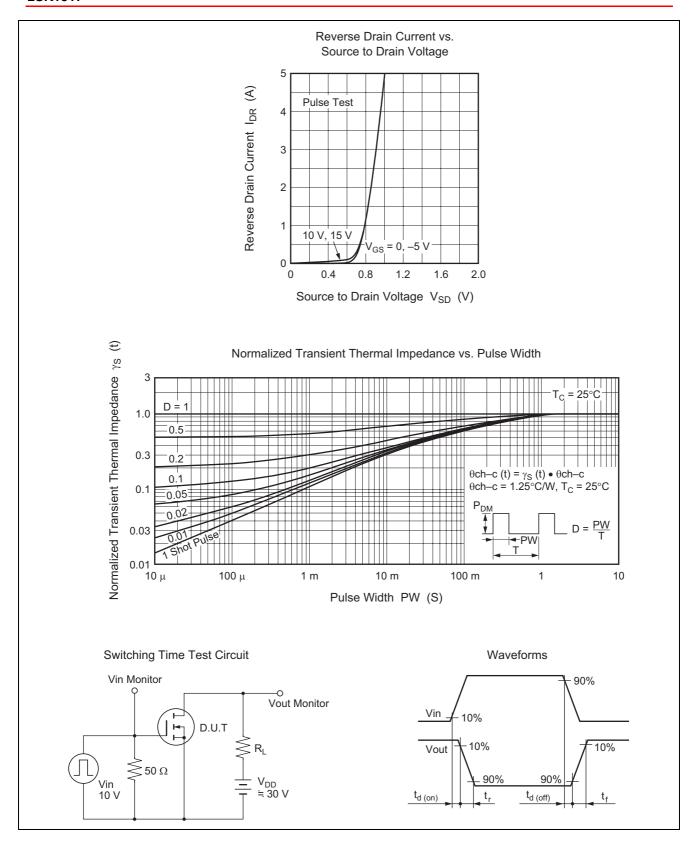
Item	Symbol	Min	Тур	Max	Unit	Test conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	1500	_	_	V	$I_D = 10 \text{ mA}, V_{GS} = 0$
Gate to source leak current	I_{GSS}	_	_	±1	μΑ	$V_{GS} = \pm 20 \text{ V}, V_{DS} = 0$
Zero gate voltage drain current	I_{DSS}	_	_	500	μΑ	$V_{DS} = 1200 \text{ V}, V_{GS} = 0$
Gate to source cutoff voltage	V _{GS(off)}	2.0	_	4.0	V	$I_D = 1 \text{ mA}, V_{DS} = 10 \text{ V}$
Static drain to source on state	R _{DS(on)}	_	9	12	Ω	$I_D = 2 A$, $V_{GS} = 15 V^{*3}$
resistance						
Forward transfer admittance	y _{fs}	0.45	0.75	_	S	$I_D = 1 \text{ A}, V_{DS} = 20 \text{ V}^{*3}$
Input capacitance	Ciss	_	990	_	pF	$V_{DS} = 10 \text{ V}, V_{GS} = 0,$
Output capacitance	Coss	_	125	_	pF	f = 1 MHz
Reverse transfer capacitance	Crss	_	60	_	pF	
Turn-on delay time	t _{d(on)}	_	17	_	ns	$I_D = 2 A, V_{GS} = 10 V,$
Rise time	t _r	_	70	_	ns	$R_L = 15 \Omega$
Turn-off delay time	t _{d(off)}	_	110	_	ns]
Fall time	t _f	_	60	_	ns]
Body to drain diode forward voltage	V_{DF}	_	0.9	_	V	$I_F = 2 A, V_{GS} = 0$
Body to drain diode reverse recovery	t _{rr}	_	1750	_	ns	$I_F = 2 A, V_{GS} = 0,$
time						$di_F/dt = 100 A/\mu s$

Note: 3. Pulse test

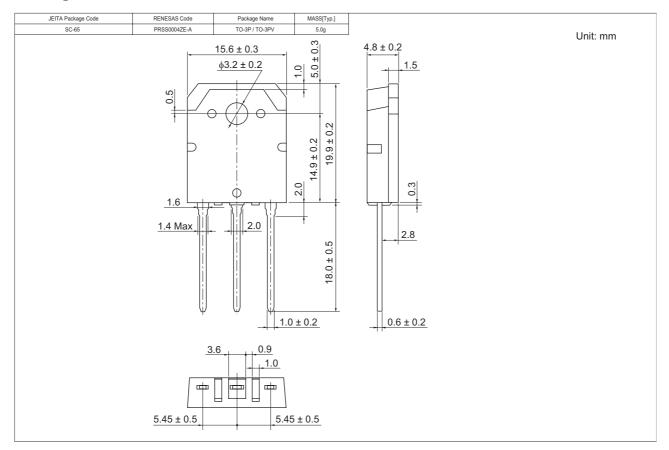
Main Characteristics







Package Dimensions



Ordering Information

Part Name	Quantity	Shipping Container
2SK1317-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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