

2SK1526, 2SK1527

Silicon N Channel MOS FET

REJ03G0950-0200

(Previous: ADE-208-1290)

Rev.2.00 Sep 07, 2005

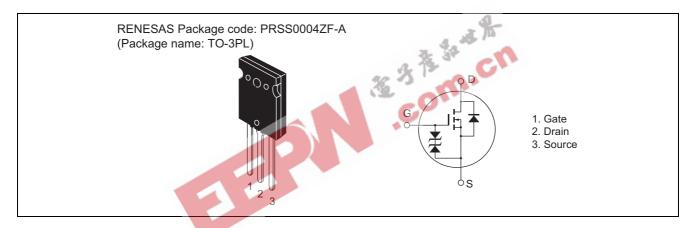
Application

High speed power switching

Features

- Low on-resistance
- High speed switching
- Low drive current
- No secondary breakdown
- Suitable for switching regulator and DC-DC converter

Outline



Absolute Maximum Ratings

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

Iten	1	Symbol	Ratings	Unit
Drain to source voltage	2SK1526	V _{DSS}	450	V
	2SK1527		500	
Gate to source voltage		V _{GSS}	±30	V
Drain current		I _D	40	А
Drain peak current		I _{D(pulse)} *1	160	А
Body to drain diode reverse	e drain current	I _{DR}	40	А
Channel dissipation		Pch* ²	250	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

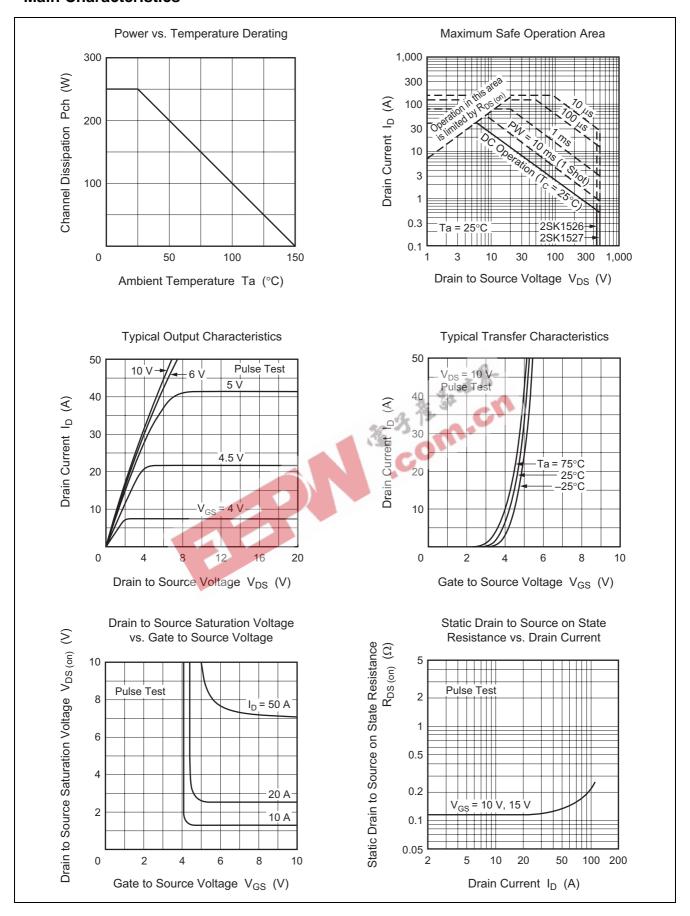
Electrical Characteristics

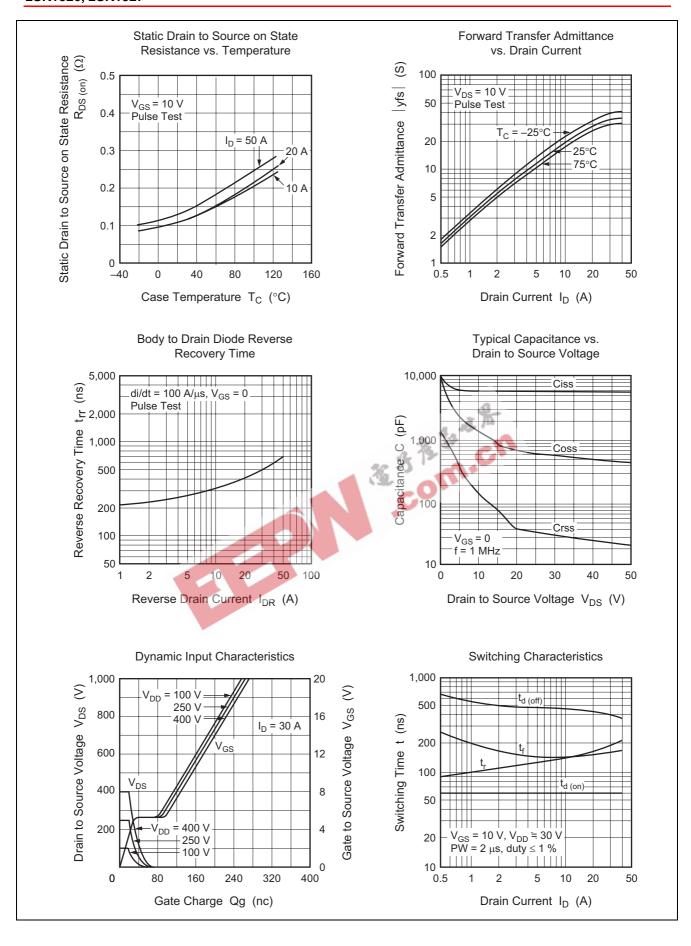
 $(Ta = 25^{\circ}C)$

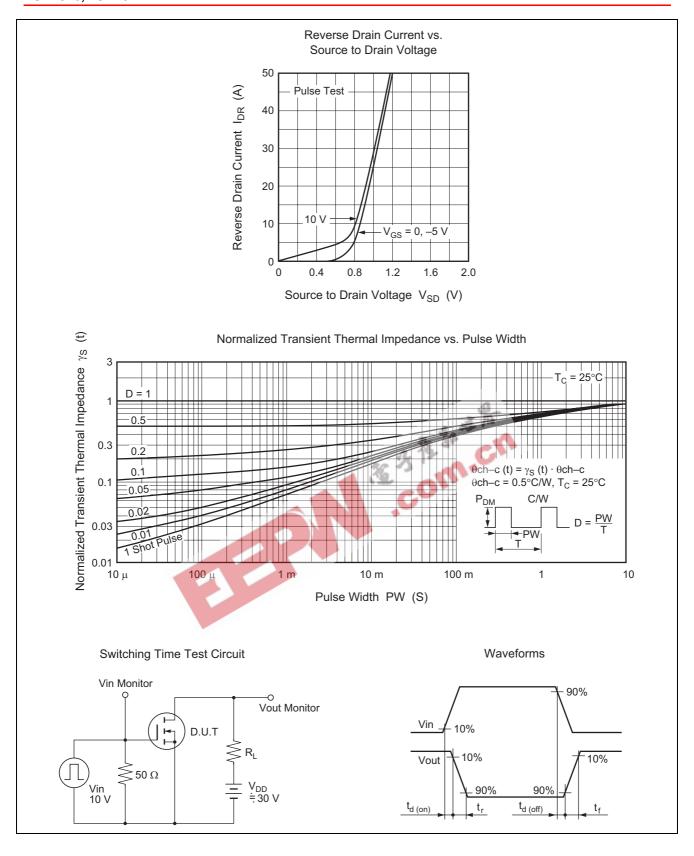
Item		Symbol	Min	Тур	Max	Unit	Test conditions
Drain to source	2SK1526	$V_{(BR)DSS}$	450	_	_	V	$I_D = 10 \text{ mA}, V_{GS} = 0$
breakdown voltage	2SK1527		500				
Gate to source breakdow	n voltage	$V_{(BR)GSS} \\$	±30			- V	$I_G = \pm 100 \ \mu A, \ V_{DS} = 0$
Gate to source leak current		I_{GSS}		_	±10	μΑ	$V_{GS} = \pm 25 \text{ V}, V_{DS} = 0$
Zero gate voltage drain	2SK1526	I _{DSS}		-	250	μΑ	$V_{DS} = 360 \text{ V}, V_{GS} = 0$
current	2SK1527			1 36	. ×		$V_{DS} = 400 \text{ V}, V_{GS} = 0$
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	2SK1526	$R_{DS(on)}$		0.11	0.15	Ω	$I_D = 20 \text{ A}, V_{GS} = 10 \text{ V}^{*3}$
state resistance	2SK1527		4	0.12	0.16		
Forward transfer admittance		y _{fs}	20	30		S	$I_D = 20 \text{ A}, V_{DS} = 10 \text{ V}^{*3}$
Input capacitance		Ciss		5800		pF	$V_{DS} = 10 \text{ V}, V_{GS} = 0,$
Output capacitance		Coss	_	1430		pF	f = 1 MHz
Reverse transfer capacitance		Crss	_	150		pF	
Turn-on delay time		t _{d(on)}		60		ns	$I_D = 20 \text{ A}, V_{GS} = 10 \text{ V},$
Rise time		t _r		175		ns	$R_L = 1.5 \Omega$
Turn-off delay time		$t_{\text{d(off)}}$		420		ns	
Fall time		t _f	_	160	_	ns	
Body to drain diode forward voltage		V_{DF}		1.2		V	$I_F = 40 \text{ A}, V_{GS} = 0$
Body to drain diode reverse recovery		t _{rr}	_	600	_	ns	$I_F = 40 \text{ A}, V_{GS} = 0,$
time							di _F /dt = 100 A/μs

Note: 3. Pulse test

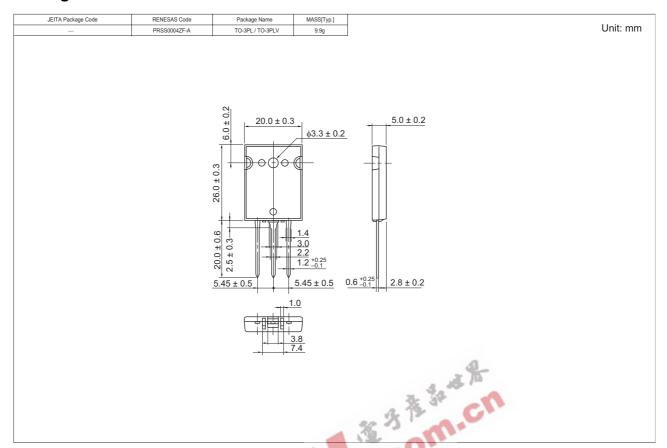
Main Characteristics







Package Dimensions



Ordering Information

Part Name	Quantity	Shipping Container
2SK1526-E	500 pcs	Box (Case)
2SK1527-E	500 pcs	Box (Case)

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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