

2SJ530(L), 2SJ530(S)

Silicon P Channel MOS FET

REJ03G0880-0500

(Previous: ADE-208-655C)

Rev.5.00 Sep 07, 2005

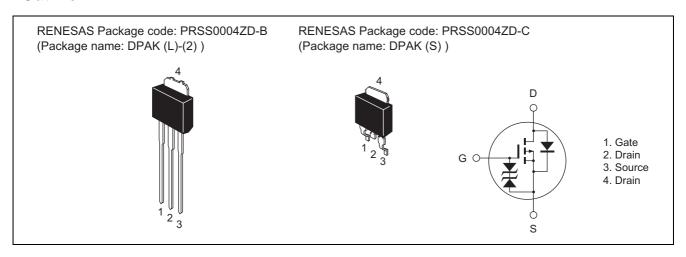
Description

High speed power switching

Features

- Low on-resistance $R_{DS (on)} = 0.08 \Omega \text{ typ.}$
- 4 V gate drive devices.
- High speed switching.

Outline



Absolute Maximum Ratings

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

Item	Symbol	Value	Unit
Drain to source voltage	V _{DSS}	-60	V
Gate to source voltage	V _{GSS}	±20	V
Drain current	I _D	-15	A
Drain peak current	I _{D (pulse)} Note 1	-60	A
Body to drain diode reverse drain current	I _{DR}	-15	A
Avalanche current	I _{AP} Note 3	-15	A
Avalanche energy	E _{AR} Note 3	19	mJ
Channel dissipation	Pch Note 2	30	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

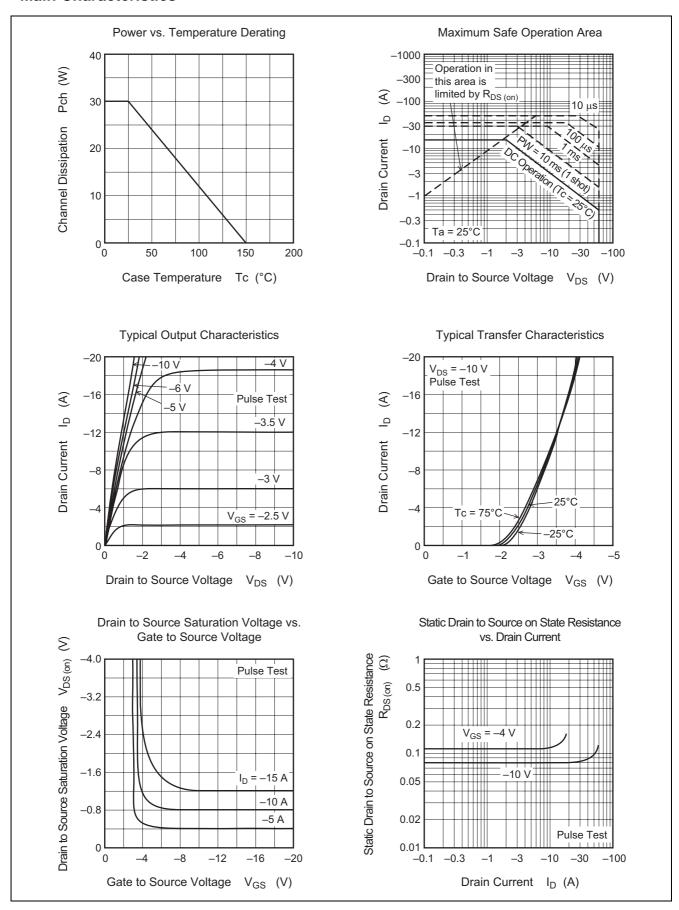
Electrical Characteristics

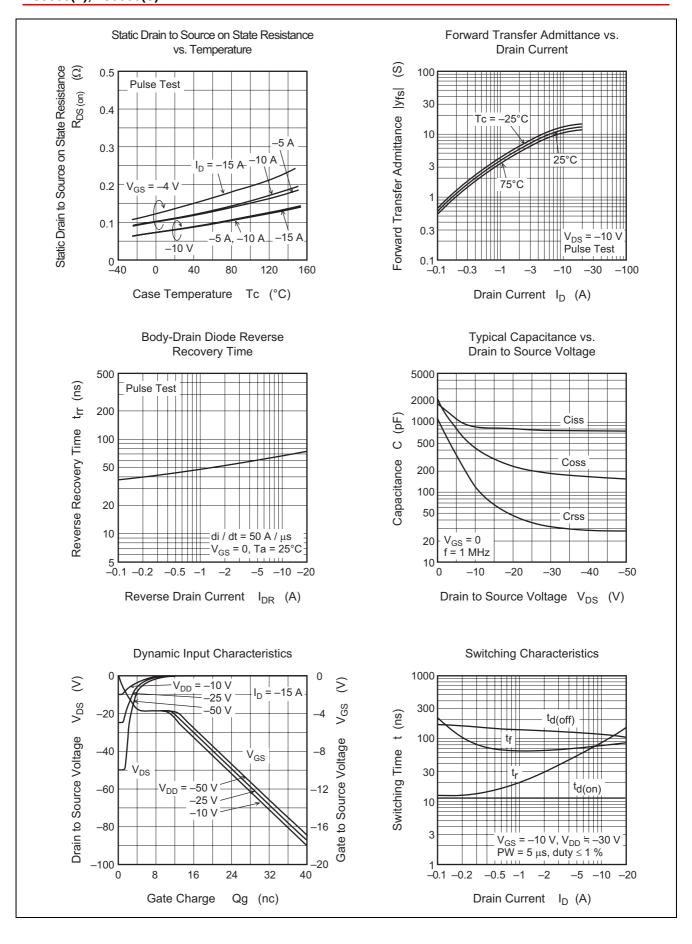
 $(Ta = 25^{\circ}C)$

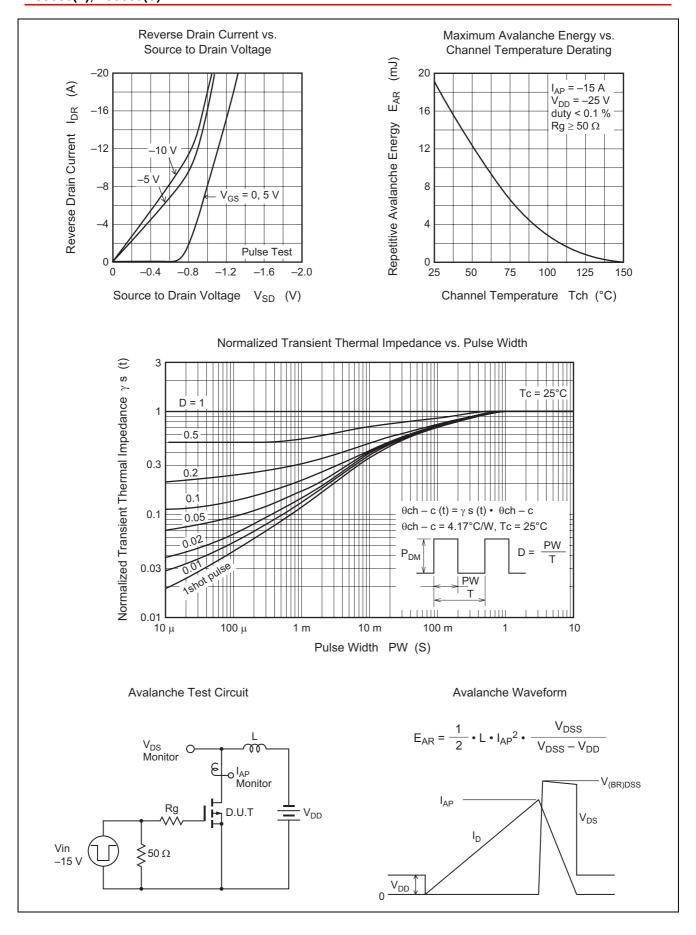
Item	Symbol	Min	Тур	Max	Unit	Test Conditions
Drain to source breakdown voltage	V _{(BR) DSS}	-60	_	_	V	$I_D = -10 \text{ mA}, V_{GS} = 0$
Gate to source breakdown voltage	V _(BR) GSS	±20	_	_	V	$I_G = \pm 100 \ \mu A, \ V_{DS} = 0$
Zero gate voltage drain current	I _{DSS}	_	_	-10	μΑ	$V_{DS} = -60 \text{ V}, V_{GS} = 0$
Gate to source leak current	I _{GSS}	_	_	±10	μΑ	$V_{GS} = \pm 16 \text{ V}, V_{DS} = 0$
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 resistance	R _{DS (on)}	_	0.08	0.10	Ω	$I_D = -8 \text{ A}, V_{GS} = -10 \text{ V}^{\text{Note 4}}$
Static drain to source on state resistance	R _{DS (on)}	_	0.11	0.16	Ω	$I_D = -8 \text{ A}, V_{GS} = -4 \text{ V}^{\text{Note 4}}$
Forward transfer admittance	y _{fs}	6.5	11	_	S	$I_D = -8 \text{ A}, V_{DS} = -10 \text{ V}^{\text{Note 4}}$
Input capacitance	Ciss	_	850	_	pF	$V_{DS} = -10 \text{ V}$
Output capacitance	Coss	_	420	_	pF	$V_{GS} = 0$
Reverse transfer capacitance	Crss	_	110	_	pF	f = 1 MHz
Turn-on delay time	t _{d (on)}	_	12	_	ns	V _{GS} = -10 V
Rise time	t _r	_	75	_	ns	$I_{D} = -8 \text{ A}$
Turn-off delay time	t _{d (off)}	_	125	_	ns	$R_L = 3.75 \Omega$
Fall time	t _f	_	75	_	ns	
Body to drain diode forward voltage	V_{DF}	_	-1.1	_	V	$I_F = -15 \text{ A}, V_{GS} = 0$
Body to drain diode reverse recovery time	t _{rr}	_	70	_	ns	$I_F = -15 \text{ A}, V_{GS} = 0$
						di _F /dt = 50 A/μs

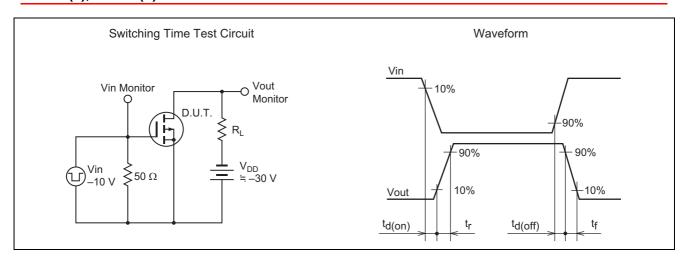
Note: 4. Pulse test

Main Characteristics

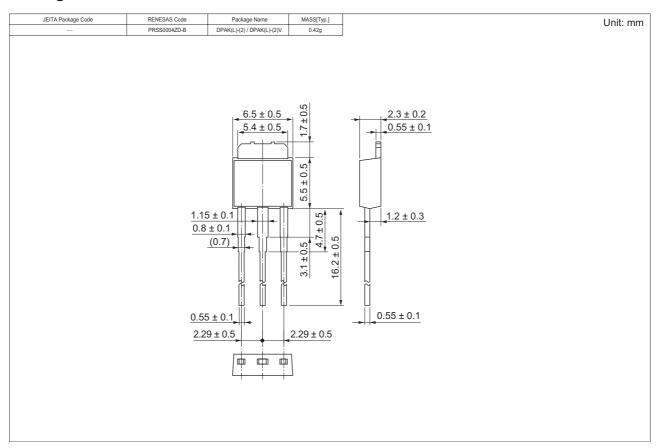


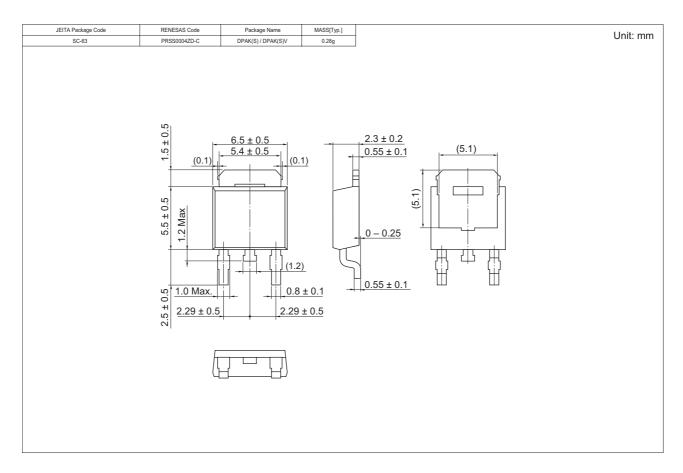






Package Dimensions





Ordering Information

Part Name	Quantity	Shipping Container
2SJ530L-E	3200 pcs	Box (Sack)
2SJ530STL-E	3000 pcs	Taping

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