



2SJ451

Silicon P Channel MOS FET

REJ03G0864-0400

Rev.4.00

Sep 07, 2007

Description

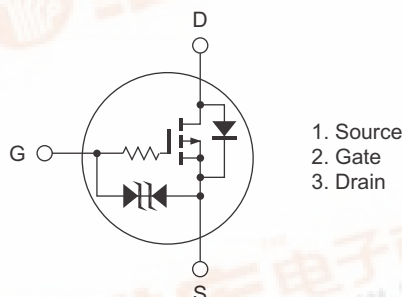
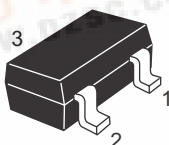
Low frequency power switching

Features

- Low on-resistance.
- Low drive power
- 2.5 V gate drive device.
- Small package (MPAK).

Outline

RENESAS Package code: PLSP0003ZB-A
(Package name: MPAK)



Note: Marking is "ZK-".

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Drain to source voltage	V_{DS}	-20	V
Gate to source voltage	V_{GS}	±20	V
Drain current	I_D	-0.2	A
Drain peak current	$I_{D(pulse)}$ ^{Note 1}	-0.4	A
Channel dissipation	P_{ch}	150	mW
Channel temperature	T_{ch}	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

Note: 1. $PW \leq 10 \mu s$, duty cycle $\leq 1\%$



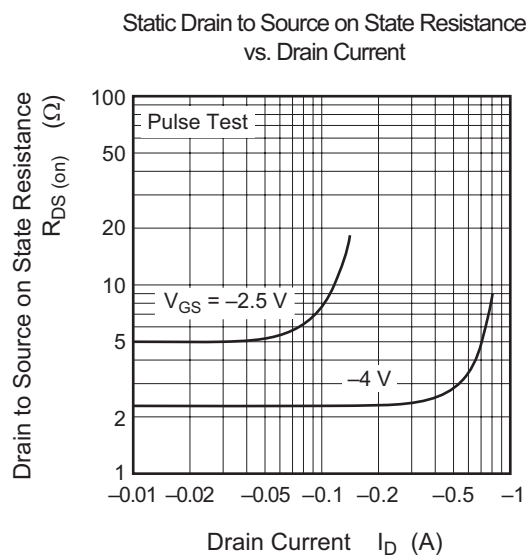
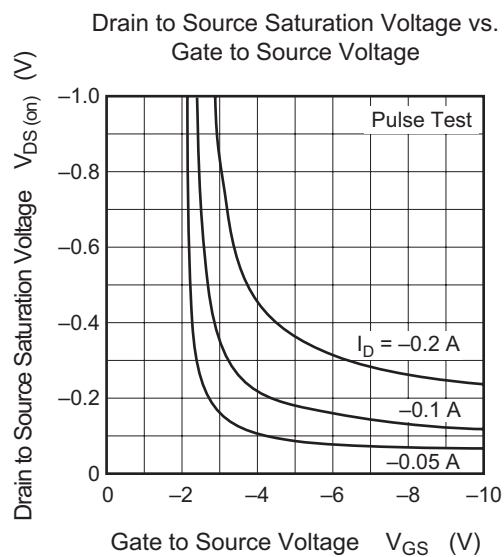
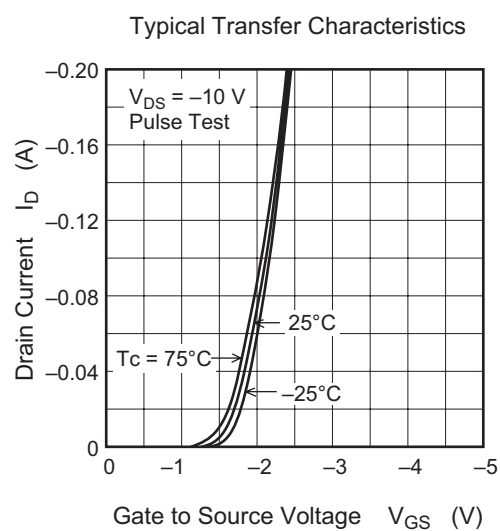
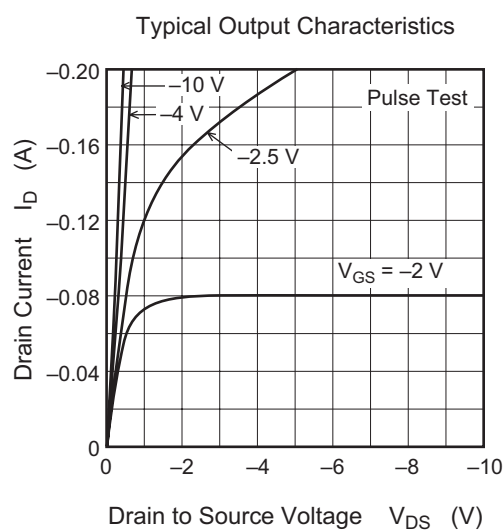
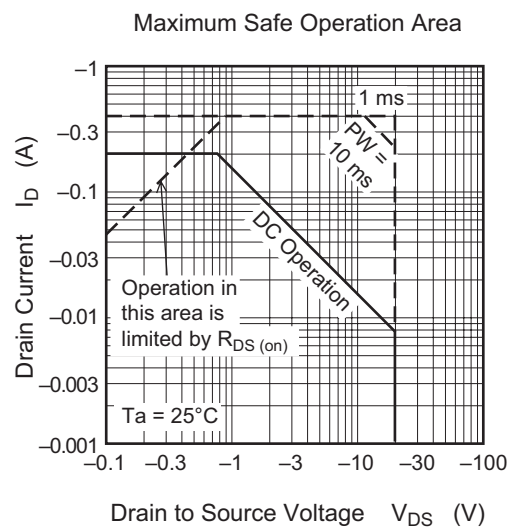
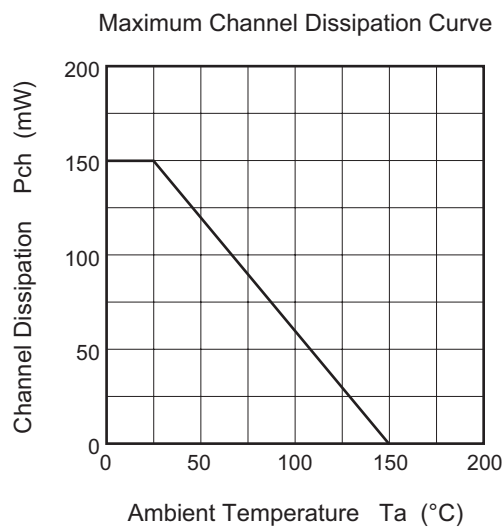
Electrical Characteristics

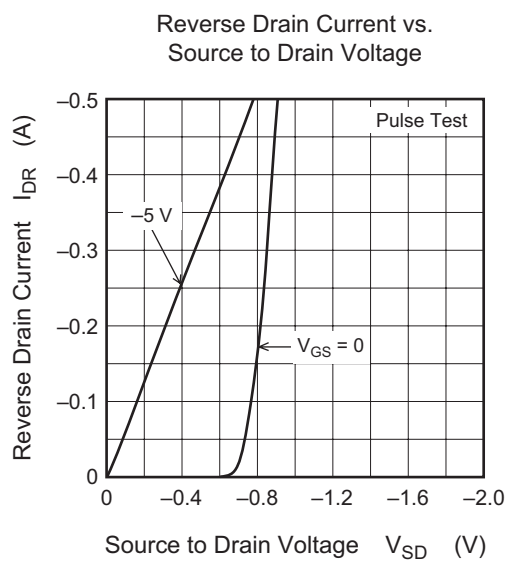
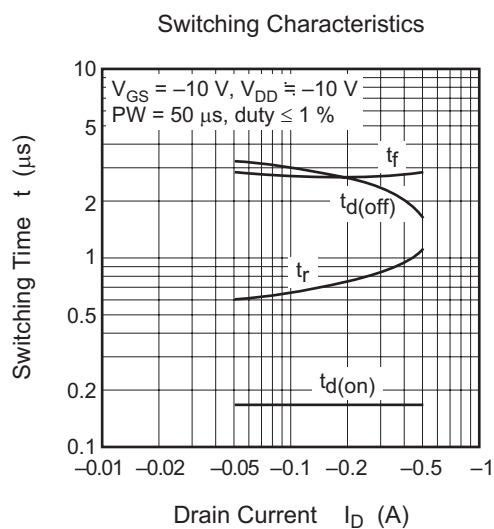
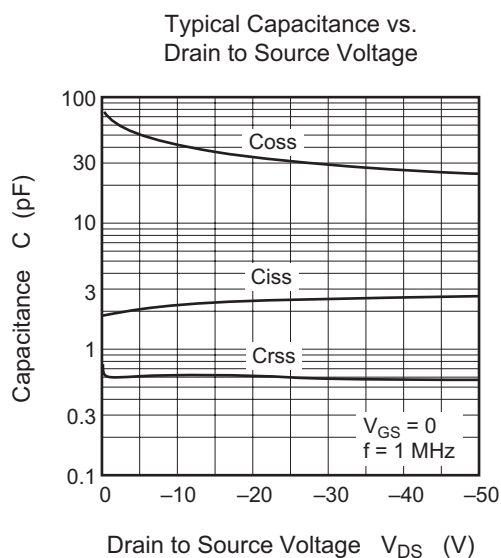
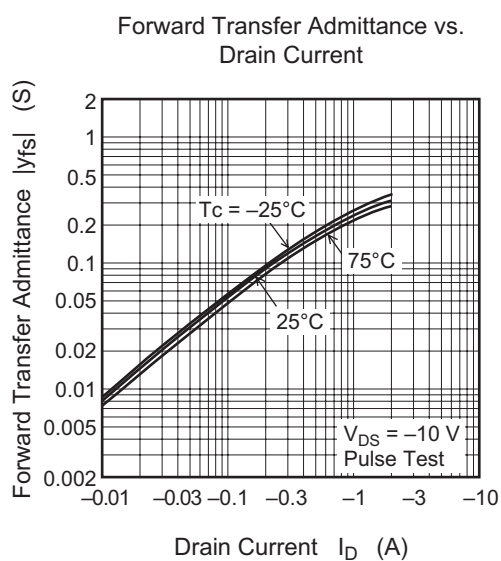
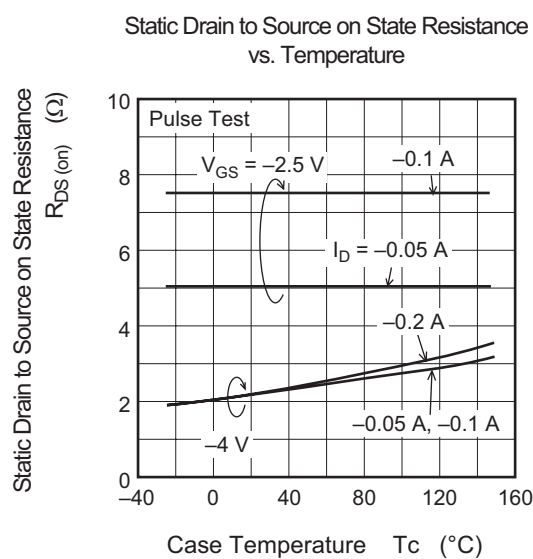
(Ta = 25°C)

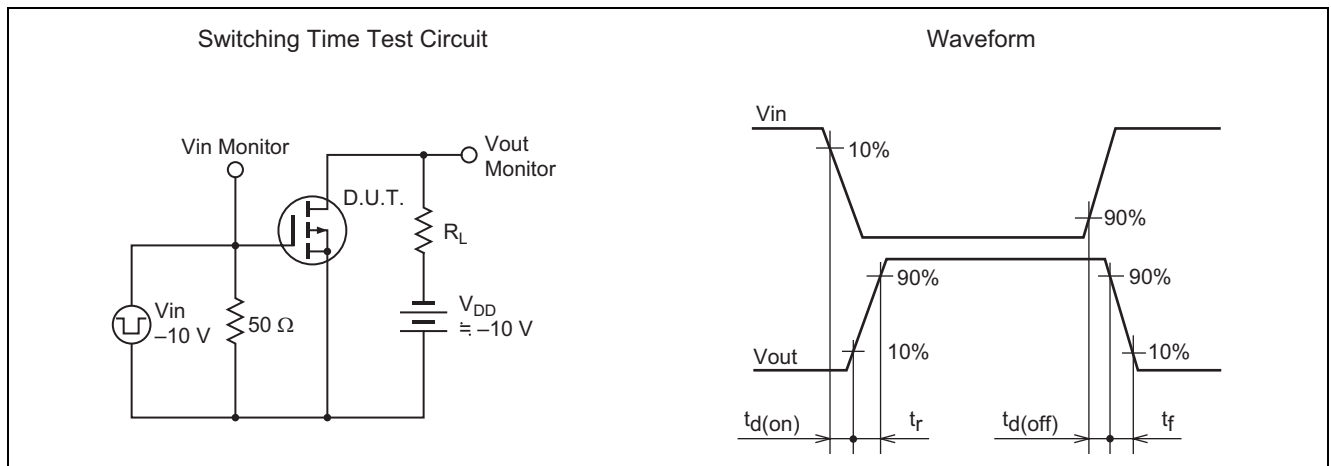
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	$V_{(BR) DSS}$	-20	—	—	V	$I_D = -100 \mu A$, $V_{GS} = 0$
Gate to source breakdown voltage	$V_{(BR) GSS}$	± 20	—	—	V	$I_G = \pm 100 \mu A$, $V_{DS} = 0$
Zero gate voltage drain current	I_{DSS}	—	—	-1.0	μA	$V_{DS} = -16 V$, $V_{GS} = 0$
Gate to source leak current	I_{GSS}	—	—	± 2.0	μA	$V_{GS} = \pm 16 V$, $V_{DS} = 0$
Gate to source cutoff voltage	$V_{GS (off)}$	-0.5	—	-1.5	V	$I_D = -10 \mu A$, $V_{DS} = -5 V$
Static drain to source on state resistance	$R_{DS (on) 1}$	—	2.3	3.5	Ω	$I_D = -100 mA$, $V_{GS} = -4 V$ ^{Note 2}
	$R_{DS (on) 2}$	—	5.0	9.0	Ω	$I_D = -40 mA$, $V_{GS} = -2.5 V$ ^{Note 2}
Forward transfer admittance	$ y_{fs} $	0.13	0.23	—	S	$I_D = -100 mA$, $V_{DS} = -10 V$ ^{Note 2}
Input capacitance	C_{iss}	—	2.4	—	pF	$V_{DS} = -10 V$
Output capacitance	C_{oss}	—	31	—	pF	$V_{GS} = 0$
Reverse transfer capacitance	C_{rss}	—	0.6	—	pF	$f = 1 MHz$
Turn-on delay time	$t_{d (on)}$	—	170	—	ns	$I_D = -0.1 A$
Rise time	t_r	—	680	—	ns	$V_{GS} = -10 V$
Turn-off delay time	$t_{d (off)}$	—	3.0	—	μs	$R_L = 100 \Omega$
Fall time	t_f	—	2.8	—	μs	

Note: 2. Pulse test

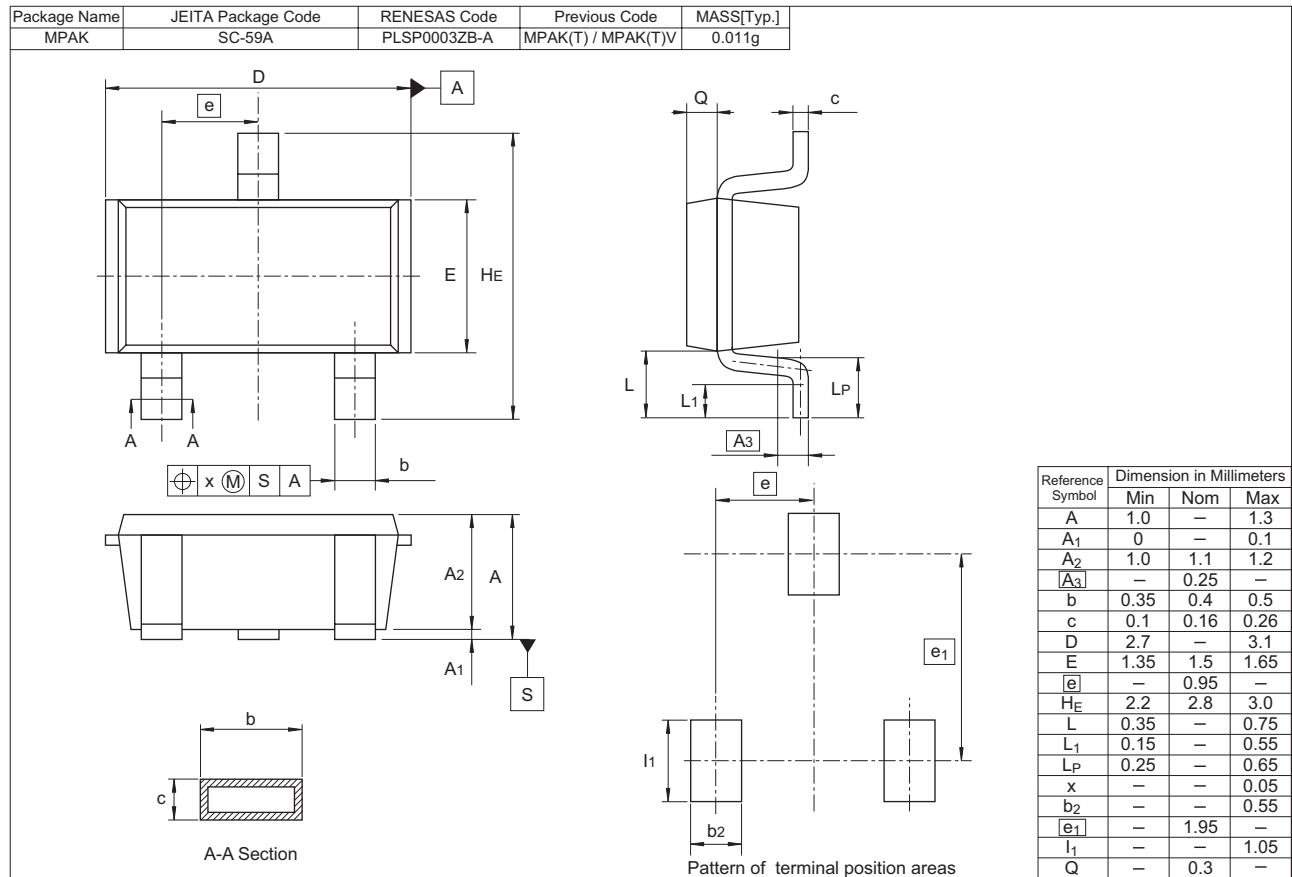
Main Characteristics







Package Dimensions



Ordering Information

Part Name	Quantity	Shipping Container
2SJ451ZK-TL-E	3000 pcs	Taping
2SJ451ZK-TR-E	3000 pcs	Taping

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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