

2SJ451

Silicon P-Channel MOS FET

HITACHI

ADE-208-382
1st. Edition

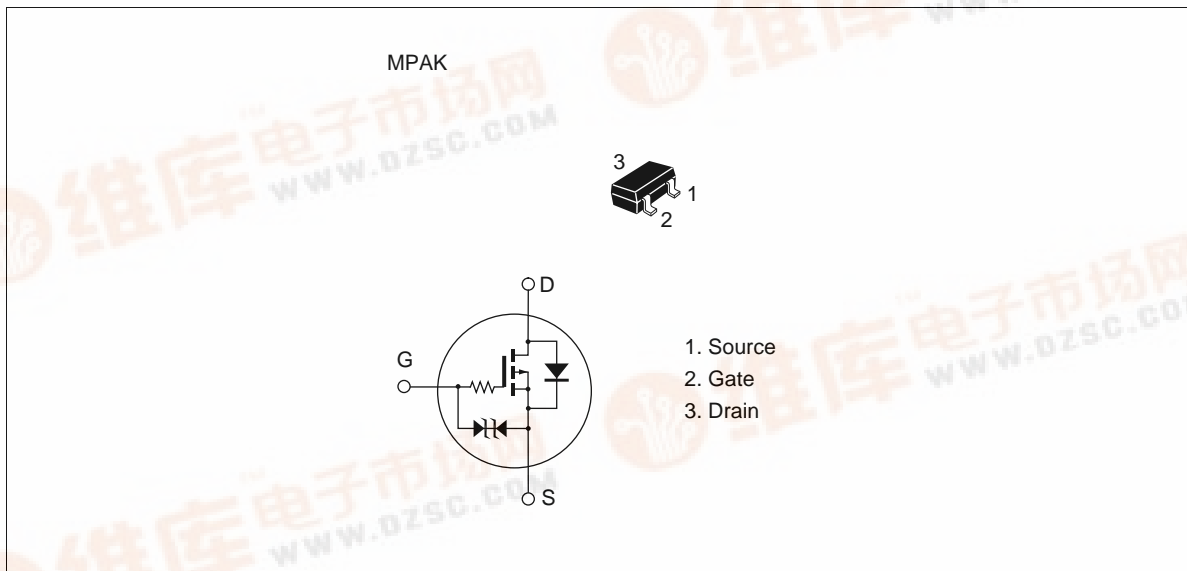
Application

Low frequency power switching

Features

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

Outline



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Absolute Maximum Ratings (Ta = 25°C)

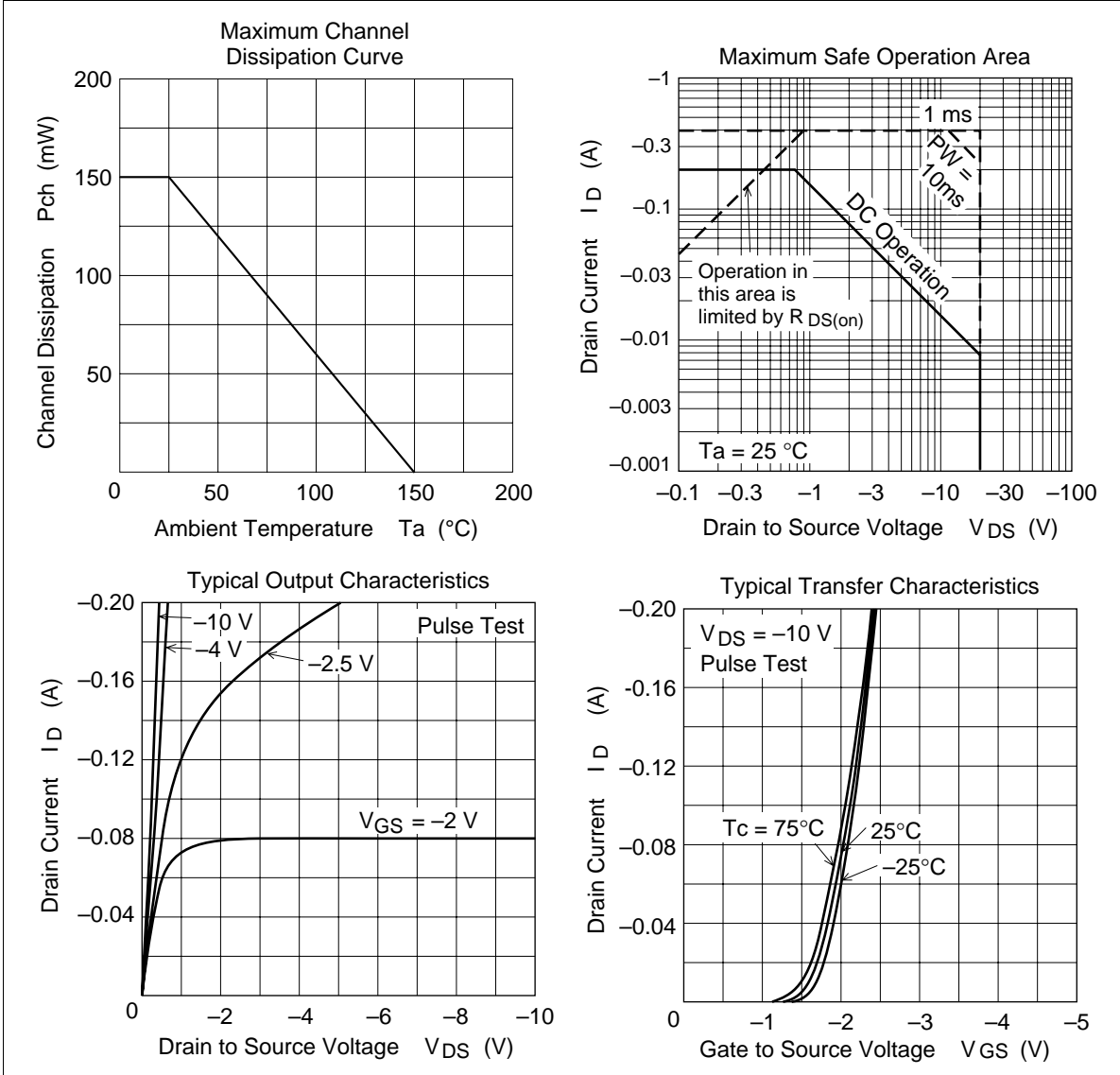
Item	Symbol	Ratings	Unit
Drain to source voltage	V_{DSS}	-20	V
Gate to source voltage	V_{GSS}	±20	V
Drain current	I_D	-0.2	A
Drain peak current	$I_{D(pulse)}^{*1}$	-0.4	A
Channel dissipation	Pch	150	mW
Channel temperature	Tch	150	°C
Storage temperature	Tstg	-55 to +150	°C

Note: 1. $PW \leq 10 \mu s$, duty cycle $\leq 1\%$
Marking is "ZK-".

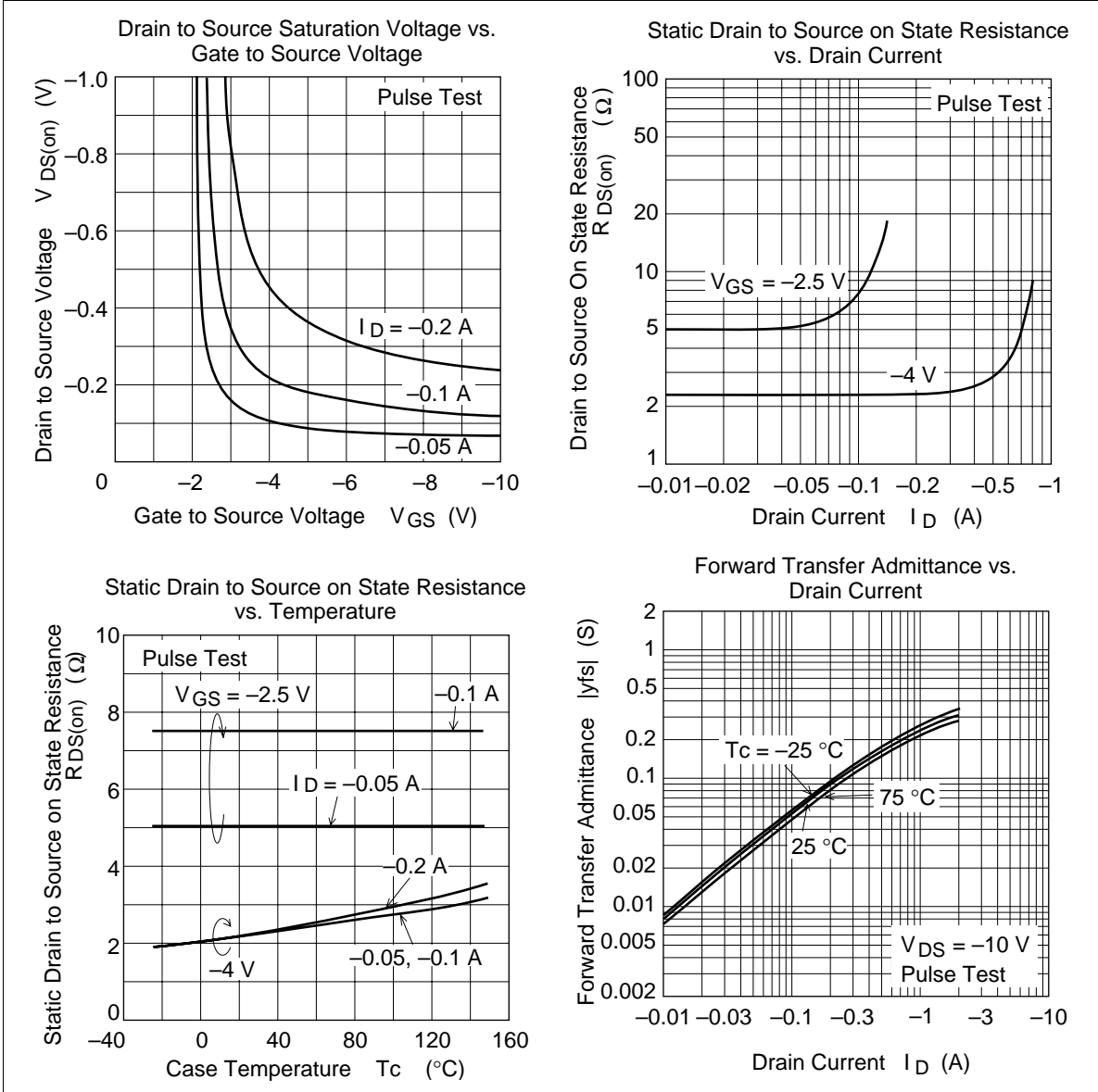
Electrical Characteristics (Ta = 25°C)

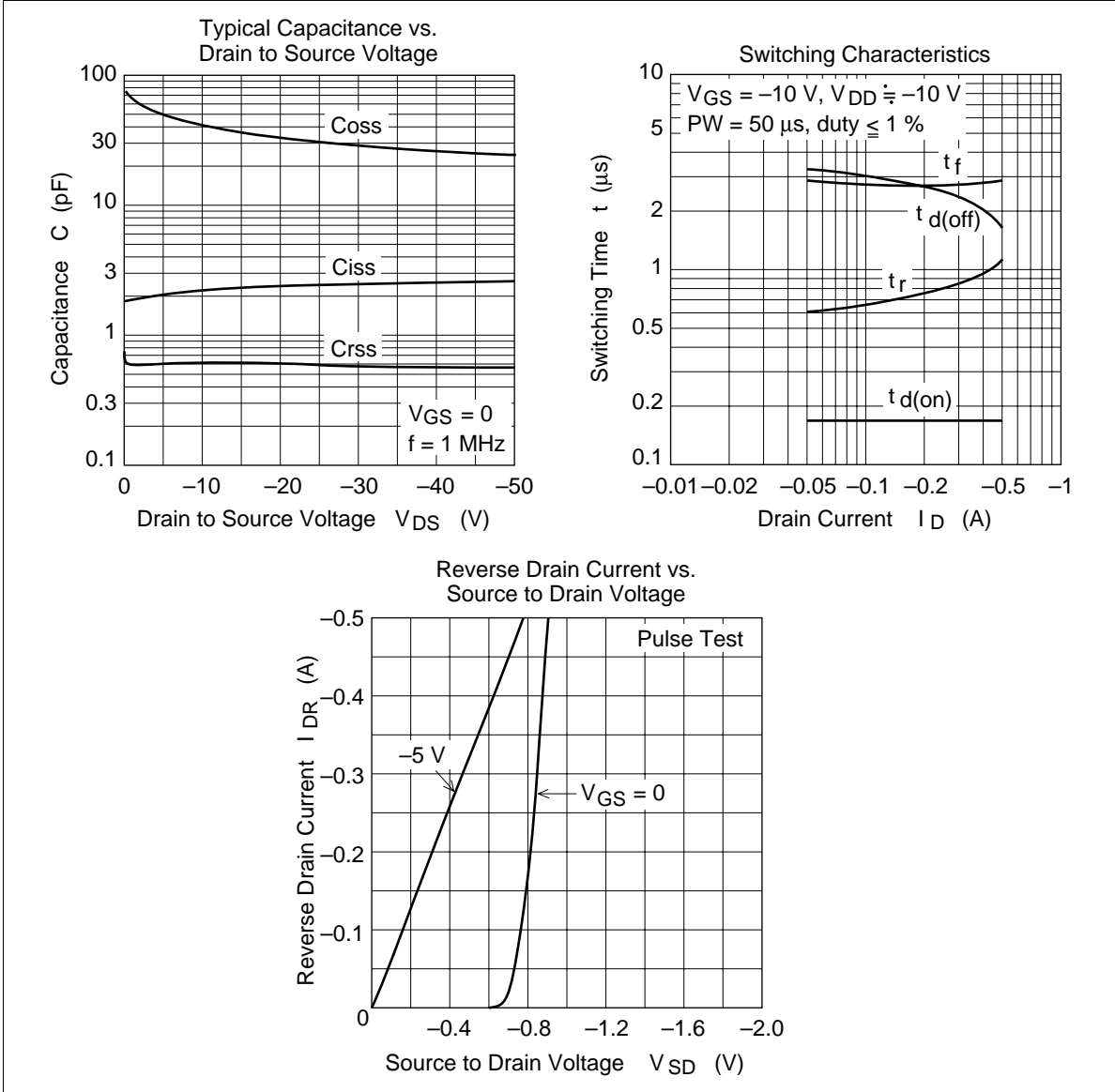
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	-20	—	—	V	$I_D = -100 \mu A$, $V_{GS} = 0$
Gate to source breakdown voltage	$V_{(BR)GSS}$	±20	—	—	V	$I_G = \pm 100 \mu A$, $V_{DS} = 0$
Zero gate voltage drain current	I_{DSS}	—	—	-1.0	μA	$V_{DS} = -16 V$, $V_{GS} = 0$
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	$I_D = -100 mA$ $V_{GS} = -4 V^{*1}$
Static drain to source on state resistance	$R_{DS(on)2}$	—	5.0	9.0	Ω	$I_D = -40 mA$ $V_{GS} = -2.5 V^{*1}$
Forward transfer admittance	$ y_{fs} $	0.13	0.23	—	S	$I_D = -100 mA^{*1}$ $V_{DS} = -10 V$
Input capacitance	Ciss	—	2.4	—	pF	$V_{DS} = -10 V$
Output capacitance	Coss	—	31	—	pF	$V_{GS} = 0$
Reverse transfer capacitance	Crss	—	0.6	—	pF	f = 1 MHz
Turn-on delay time	$t_{d(on)}$	—	0.17	—	μs	$V_{GS} = -10 V$, $I_D = -0.1 A$
Rise time	t_r	—	0.68	—	μs	$R_L = 100 \Omega$
Turn-off delay time	$t_{d(off)}$	—	3.0	—	μs	
Fall time	t_f	—	2.8	—	μs	

Note: 1. Pulse Test

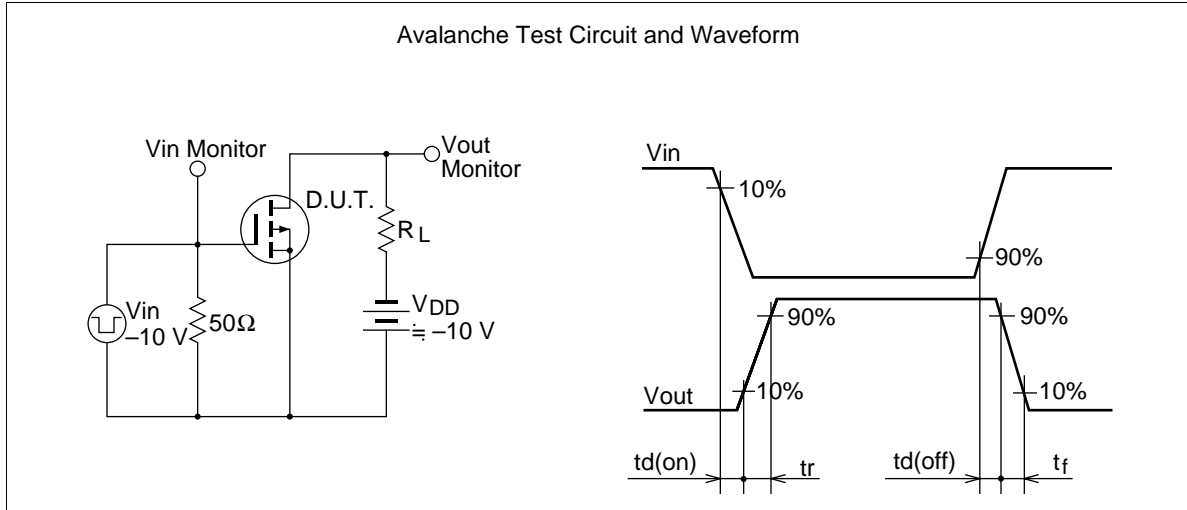


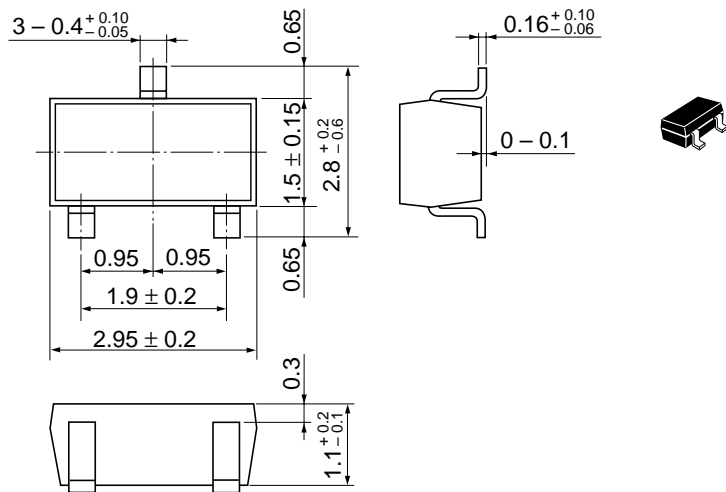
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Unit: mm

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HITACHI

Hitachi, Ltd.

Semiconductor & Integrated Circuits.
Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan
Tel: Tokyo (03) 3270-2111 Fax: (03) 3270-5109

URL NorthAmerica : <http://semiconductor.hitachi.com/>
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For further information write to:

Hitachi Semiconductor
(America) Inc.
179 East Tasman Drive,
San Jose, CA 95134
Tel: <1> (408) 433-1990
Fax: <1> (408) 433-0223

Hitachi Europe GmbH
Electronic components Group
Dornacher StraÙe 3
D-85622 Feldkirchen, Munich
Germany
Tel: <49> (89) 9 9180-0
Fax: <49> (89) 9 29 30 00

Hitachi Europe Ltd.
Electronic Components Group.
Whitebrook Park
Lower Cookham Road
Maidenhead
Berkshire SL6 8YA, United Kingdom
Tel: <44> (1628) 585000
Fax: <44> (1628) 778322

Hitachi Asia Pte. Ltd.
16 Collyer Quay #20-00
Hitachi Tower
Singapore 049318
Tel: 535-2100
Fax: 535-1533

Hitachi Asia Ltd.
Taipei Branch Office
3F, Hung Kuo Building, No.167,
Tun-Hwa North Road, Taipei (105)
Tel: <886> (2) 2718-3666
Fax: <886> (2) 2718-8180

Hitachi Asia (Hong Kong) Ltd.
Group III (Electronic Components)
7/F., North Tower, World Finance Centre,
Harbour City, Canton Road, Tsim Sha Tsui,
Kowloon, Hong Kong
Tel: <852> (2) 735 9218
Fax: <852> (2) 730 0281
Telex: 40815 HITEC HX