

2SK3378

Silicon N Channel MOS FET
High Speed Switching

HITACHI

ADE-208-805 (Z)

1st.Edition.

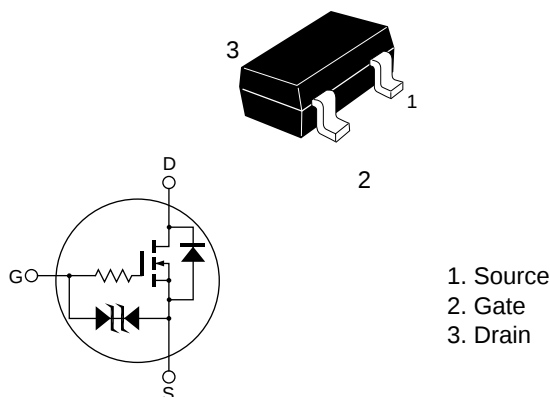
June 1999

Features

- Low on-resistance
 $R_{DS} = 2.7 \Omega$ typ. ($V_{GS} = 10 \text{ V}$, $I_D = 50 \text{ mA}$)
 $R_{DS} = 4.7 \Omega$ typ. ($V_{GS} = 4 \text{ V}$, $I_D = 20 \text{ mA}$)
- 4 V gate drive device.
- Small package (COMPAK)

Outline

COMPAK



Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V _{DSS}	30	V
Gate to source voltage	V _{GSS}	±20	V
Drain current	I _D	100	mA
Drain peak current	I _{D(pulse)} ^{Note1}	400	mA
Body-drain diode reverse drain current	I _{DR}	100	mA
Channel dissipation	Pch ^{Note 2}	300	mW
Channel temperature	Tch	150	°C
Storage temperature	Tstg	−55 to +150	°C

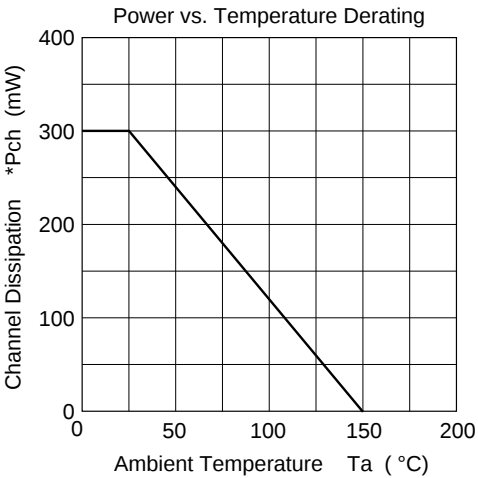
Note: 1. PW ≤ 10 μs, duty cycle ≤ 1%
2. Value on the alumina ceramic board (12.5 x 20 x 0.7 mm)

Electrical Characteristics (Ta = 25°C)

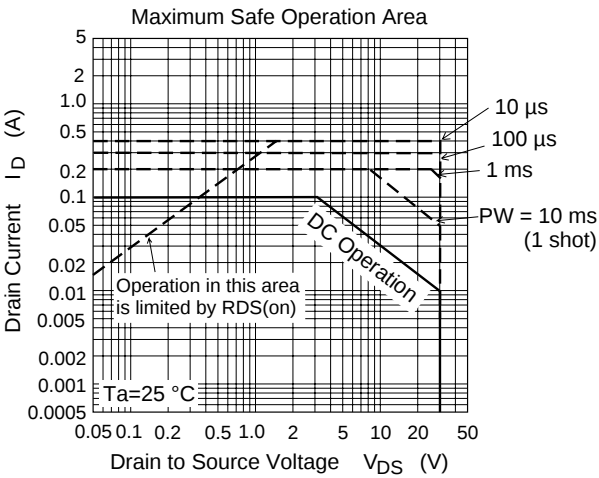
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	V _{(BR)DSS}	30	—	—	V	I _D = 100 μA, V _{GS} = 0
Gate to source breakdown voltage	V _{(BR)GSS}	±20	—	—	V	I _G = ±100 μA, V _{DS} = 0
Gate to source leak current	I _{GSS}	—	—	±5	μA	V _{GS} = ±16 V, V _{DS} = 0
Zero gate voltage drain current	I _{DSS}	—	—	1	μA	V _{DS} = 30 V, V _{GS} = 0
Gate to source cutoff voltage	V _{GS(off)}	1.3	—	2.3	V	I _D = 10μA, V _{DS} = 5 V
Static drain to source on state resistance	R _{DS(on)}	—	2.7	3.5	Ω	I _D = 50 mA, V _{GS} = 10 V ^{Note 3}
	R _{DS(on)}	—	4.7	7.0	Ω	I _D = 20 mA, V _{GS} = 4 V ^{Note 3}
Forward transfer admittance	y _{fs}	55	85	—	mS	I _D = 50 mA, V _{DS} =10 V ^{Note 3}
Input capacitance	Ciss	—	1.6	—	pF	V _{DS} = 10 V
Output capacitance	Coss	—	7	—	pF	V _{GS} = 0
Reverse transfer capacitance	Crss	—	0.5	—	pF	f = 1 MHz
Turn-on delay time	t _{d(on)}	—	100	—	ns	I _D = 50 mA, V _{GS} = 10 V
Rise time	t _r	—	330	—	ns	R _L = 200 Ω
Turn-off delay time	t _{d(off)}	—	1150	—	ns	
Fall time	t _f	—	940	—	ns	

Note: 3. Pulse test
4. Marking is EN
See characteristics curves of 2SK3288

Main Characteristics



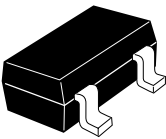
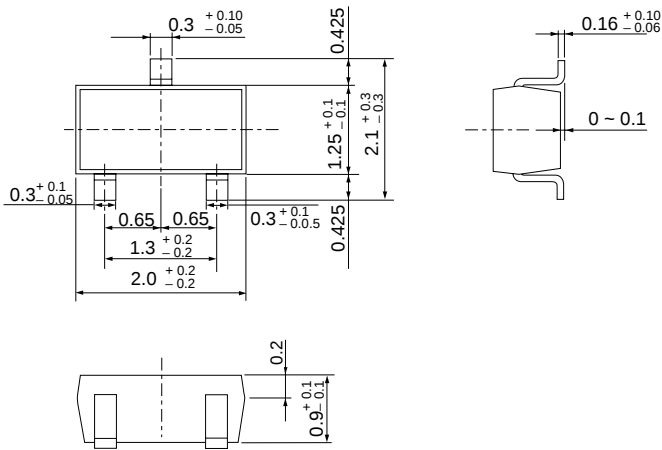
*Value on the alumina ceramic board. (12.5x20x0.7mm)



Value on the alumina ceramic board. (12.5x20x0.7mm)

Package Dimensions

Unit: mm



Hitachi Code	CMPAK
EIAJ	SC-70
JEDEC	—

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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

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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 Straße 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
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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

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