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# HAT2026R

Silicon N Channel Power MOS FET  
High Speed Power Switching

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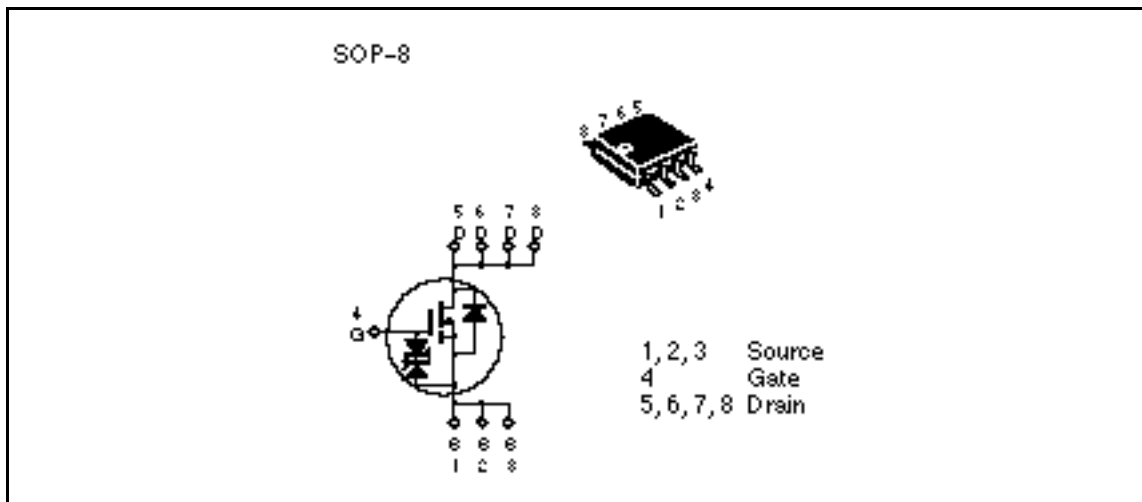
ADE-208-523 B  
3rd. Edition

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## Features

- Low on-resistance
- Capable of 2.5 V gate drive
- Low drive current
- High density mounting

## Outline



# HAT2026R

## Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	$V_{DSS}$	20	V
Gate to source voltage	$V_{GSS}$	±12	V
Drain current	$I_D$	11	A
Drain peak current	$I_{D(pulse)}^{*1}$	88	A
Body to drain diode reverse drain current	$I_{DR}$	11	A
Channel dissipation	$P_{ch}^{*2}$	2.5	W
Channel temperature	Tch	150	°C
Storage temperature	Tstg	-55 to +150	°C

Notes: 1. PW = 10µs, duty cycle = 1 %

2. When using the glass epoxy board (FR4 40 x 40 x 1.6 mm), PW = 10s

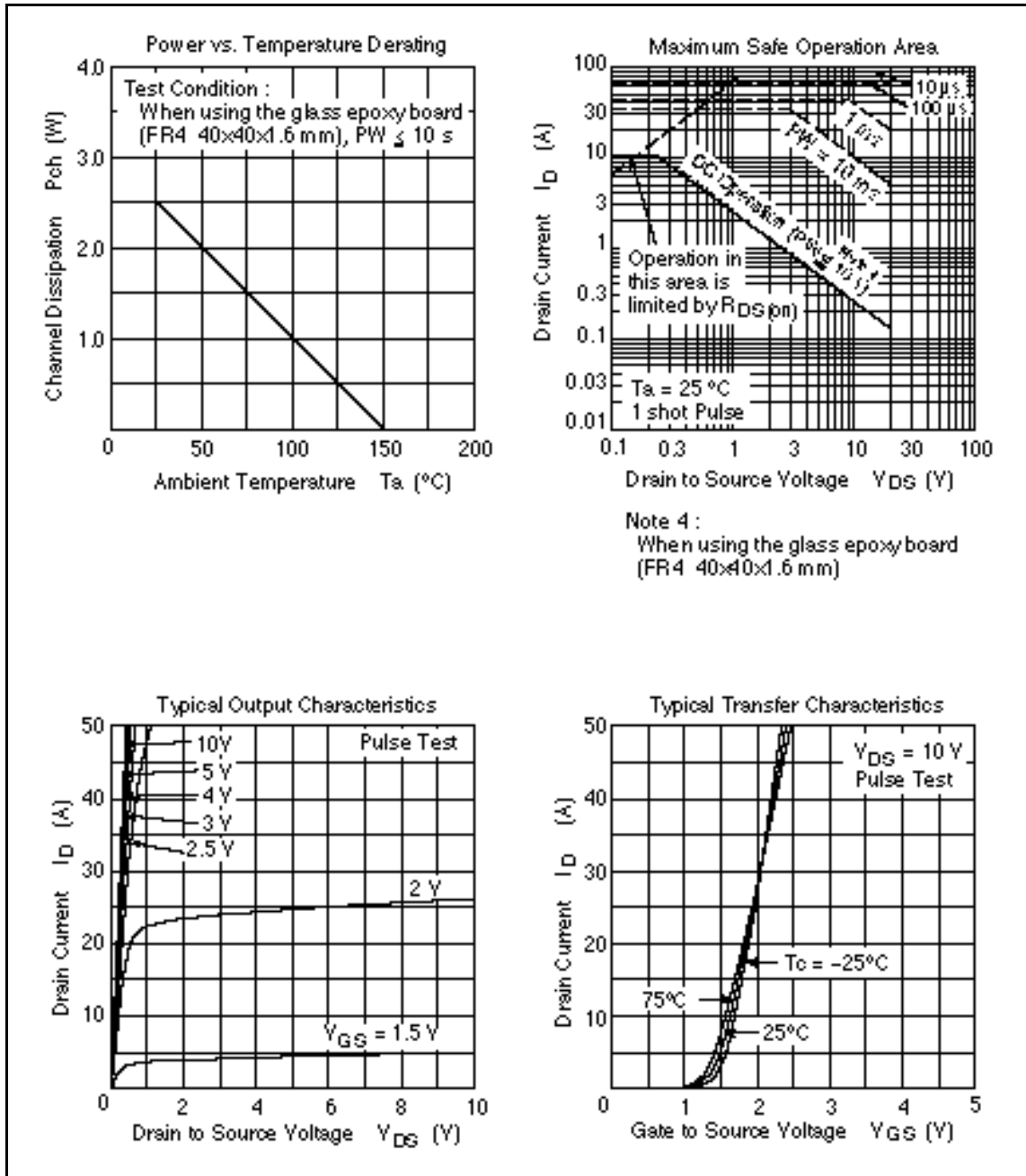
## Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	20	—	—	V	$I_D = 10mA, V_{GS} = 0$
Gate to source breakdown voltage	$V_{(BR)GSS}$	±12	—	—	V	$I_G = ±100µA, V_{DS} = 0$
Gate to source leak current	$I_{GSS}$	—	—	±10	µA	$V_{GS} = ±10V, V_{DS} = 0$
Zero gate voltage drain current	$I_{DSS}$	—	—	1	µA	$V_{DS} = 20V, V_{GS} = 0$
Gate to source cutoff voltage	$V_{GS(off)}$	0.4	—	1.4	V	$V_{DS} = 10V, I_D = 1mA$
Static drain to source on state resistance	$R_{DS(on)}$	—	0.011	0.015		$I_D = 6A, V_{GS} = 4V^{*1}$
	$R_{DS(on)}$	—	0.014	0.021		$I_D = 6A, V_{GS} = 2.5V^{*1}$
Forward transfer admittance	$ y_{fs} $	18	27	—	S	$I_D = 6A, V_{DS} = 10V^{*1}$
Input capacitance	Ciss	—	1760	—	pF	$V_{DS} = 10V$
Output capacitance	Coss	—	1130	—	pF	$V_{GS} = 0$
Reverse transfer capacitance	Crss	—	450	—	pF	f = 1MHz
Turn-on delay time	$t_{d(on)}$	—	35	—	ns	$V_{GS} = 4V, I_D = 6A$
Rise time	$t_r$	—	275	—	ns	$V_{DD} = 10V$
Turn-off delay time	$t_{d(off)}$	—	300	—	ns	
Fall time	$t_f$	—	340	—	ns	
Body to drain diode forward voltage	$V_{DF}$	—	0.83	1.08	V	$I_F = 11A, V_{GS} = 0^{*1}$
Body to drain diode reverse recovery time	$t_{rr}$	—	75	—	ns	$I_F = 11A, V_{GS} = 0$ diF/ dt = 20A/µs

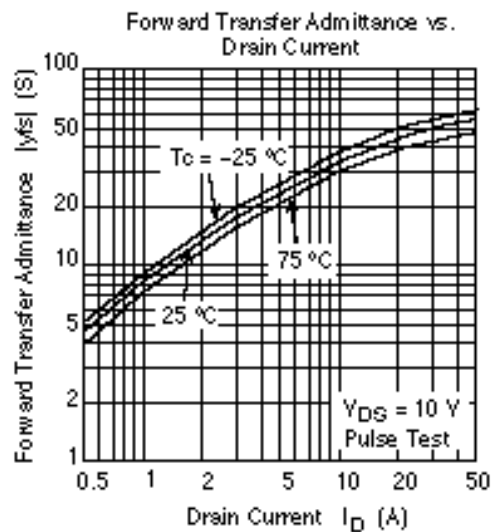
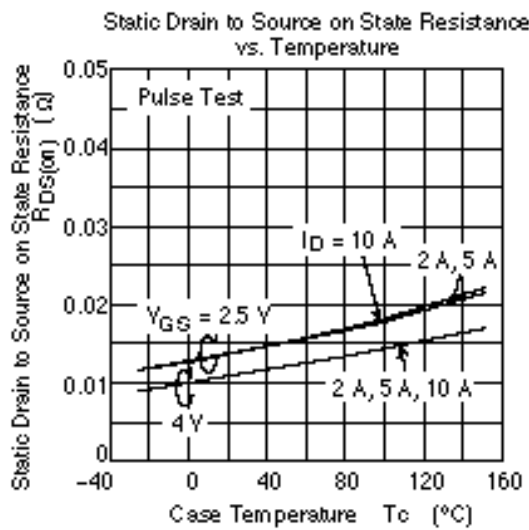
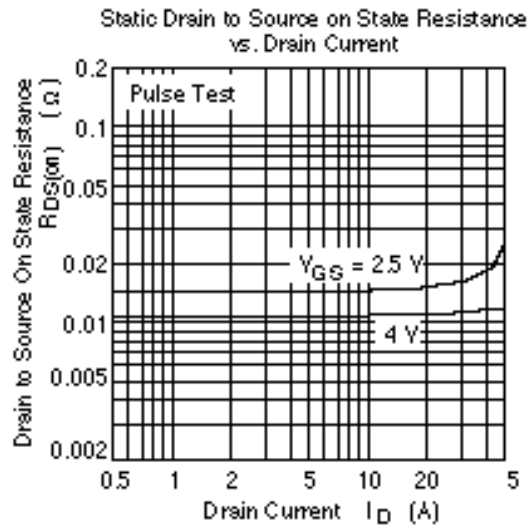
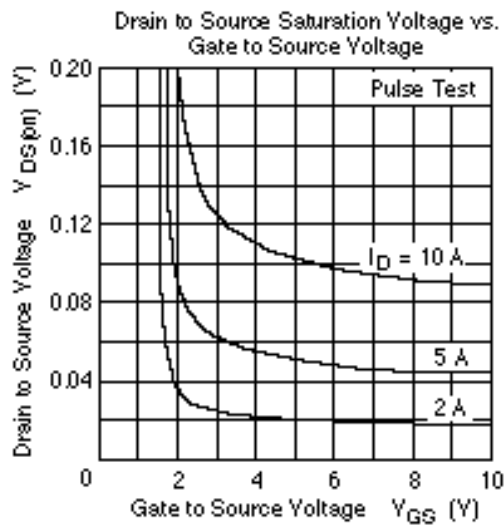
Note: 1. Pulse test

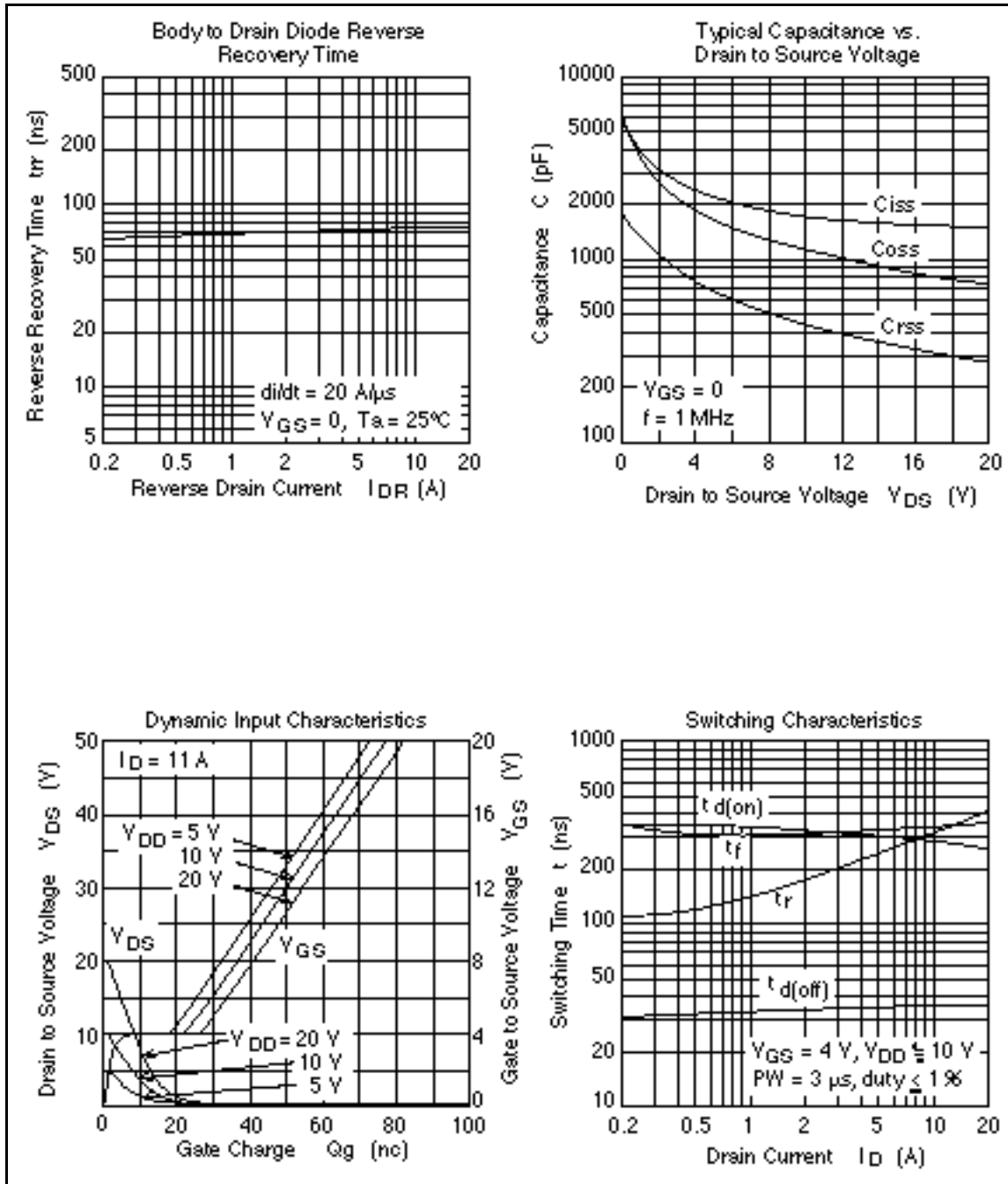
The specifications may be change without notice.

Main Characteristics

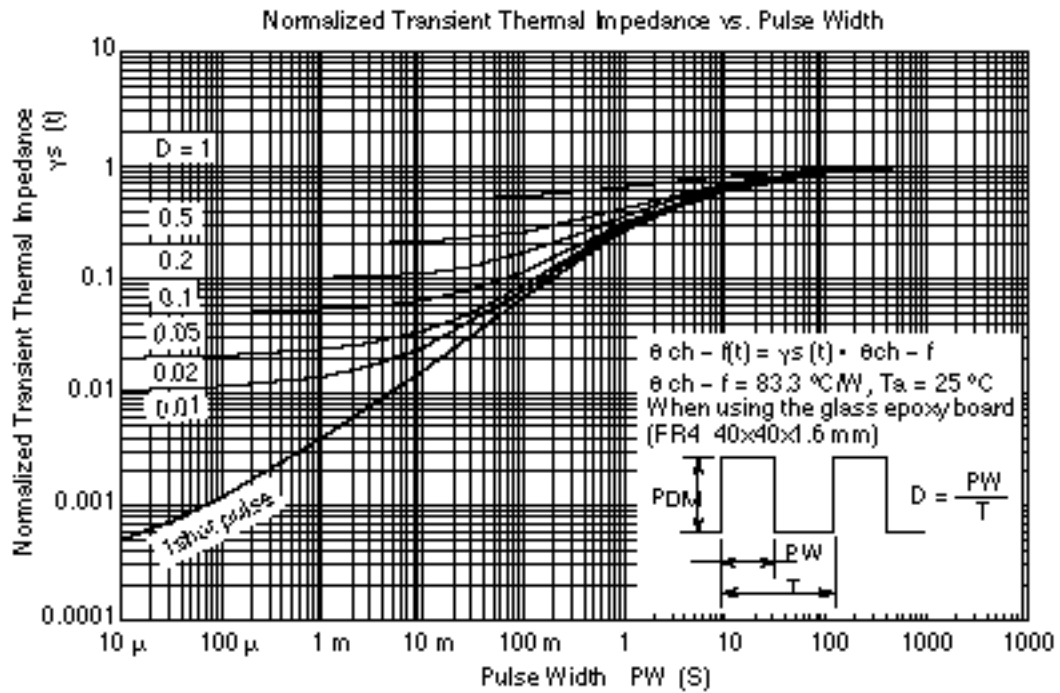
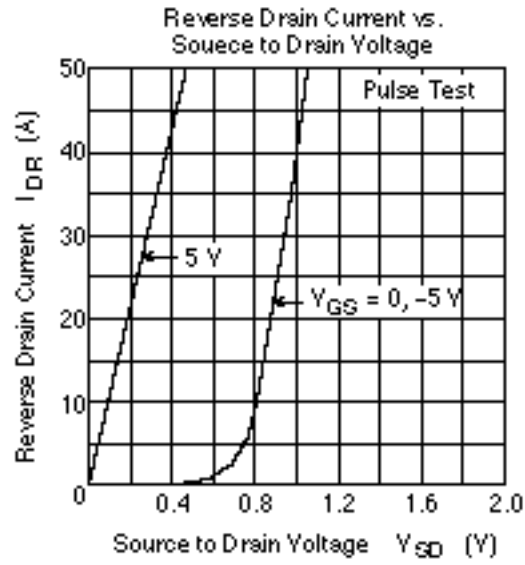


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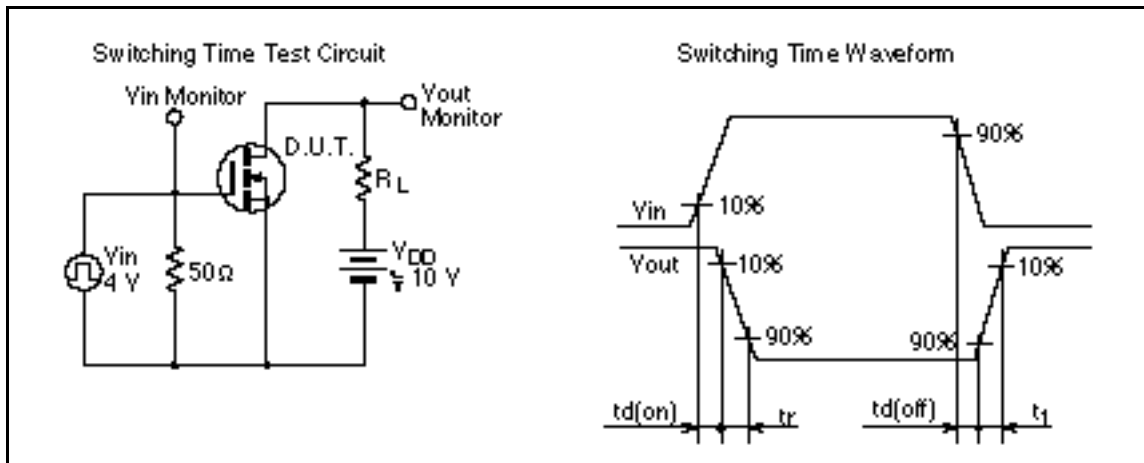




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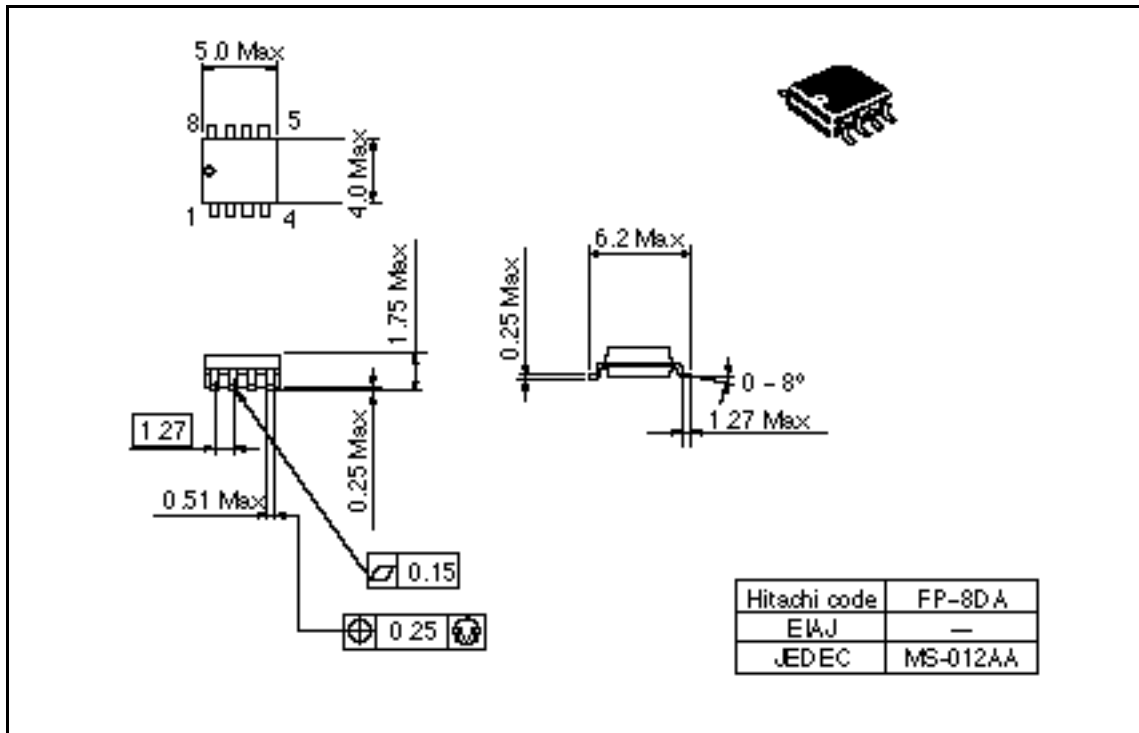
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## Package Dimensions

Unit: mm



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# HITACHI

## Hitachi, Ltd.

Semiconductor & IC Div.

Nippon Bldg., 2-6-2, Ohia-machi, Chiyoda-ku, Tokyo 100, Japan

Tel Tokyo (03) 3270-2111

Fax (03) 3270-5109

For further information write to:

Hitachi America, Ltd.

Semiconductor & IC Div.

2000 Sierra Point Parkway

Brea, CA 94005-4935

U.S.A.

Tel 415-589-8300

Fax 415-589-4207

Hitachi Europe GmbH

Electronic Components Group

Continental Europe

Dornacher Straße 3

D-85632 Feldkirchen

München

Tel 089-9 91 80-0

Fax 089-9 29 30 00

Hitachi Europe Ltd.

Electronic Components Div.

Northern Europe Headquarters

Whitebrook Park

Lower Cookham Road

Midlehead

Berkshire SL6 5YA

United Kingdom

Tel 0628-585000

Fax 0628-778322

Hitachi Asia Pte. Ltd.

#6 Collyer Quay #20-00

Hitachi Tower

Singapore 04104

Tel 535-2100

Fax 535-1533

Hitachi Asia (Hong Kong) Ltd.

Unit 706, North Tower,

World Finance Centre

Harbour City, Canton Road

Tsim Sha Tsui, Kowloon

Hong Kong

Tel 27359218

Fax 27308074

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