

HAT1065T

Silicon P Channel MOS FET
High Speed Power Switching

REJ03G0161-0200

Rev.2.00

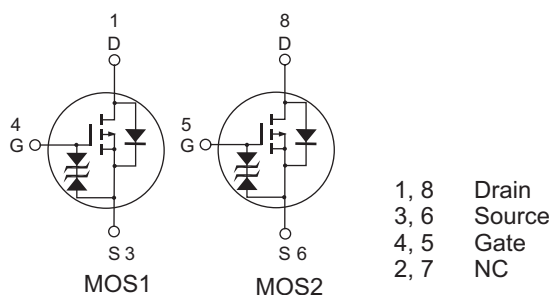
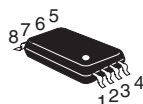
Aug 06, 2007

Features

- Low on-resistance
- Capable of -4 V gate drive
- High density mounting

Outline

RENESAS Package code: PTSP0008JB-B
(Package name: TSSOP-8 <TTP-8DV>)



Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V_{DSS}	-200	V
Gate to source voltage	V_{GSS}	±15	V
Drain current	I_D	-0.25	A
Drain peak current	$I_{D(pulse)}$ ^{Note1}	-1	A
Body-drain diode reverse drain current	I_{DR}	-0.25	A
Channel dissipation	P_{ch} ^{Note2}	1	W
Channel dissipation	P_{ch} ^{Note3}	1.5	W
Channel temperature	T_{ch}	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

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

2. 1 Drive operation ; When using the glass epoxy board (FR4 40 x 40 x 1.6 mm), $PW \leq 10 s$

3. 2 Drive operation ; When using the glass epoxy board (FR4 40 x 40 x 1.6 mm), $PW \leq 10 s$

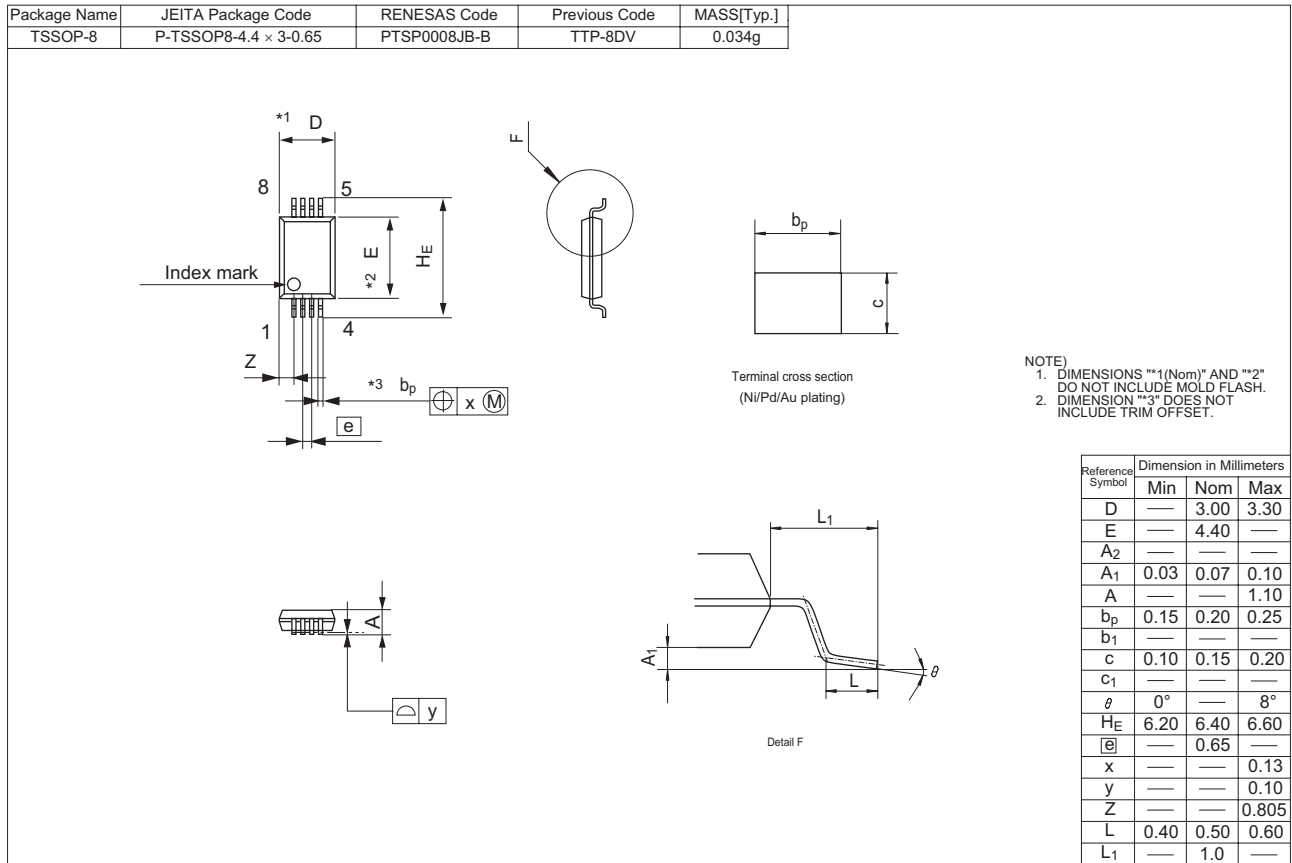
Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	-200	—	—	V	$I_D = -10 \text{ mA}$, $V_{GS} = 0$
Gate to source breakdown voltage	$V_{(BR)GSS}$	± 15	—	—	V	$I_G = \pm 100 \mu\text{A}$, $V_{DS} = 0$
Gate to source leak current	I_{GSS}	—	—	± 10	μA	$V_{GS} = \pm 12 \text{ V}$, $V_{DS} = 0$
Zero gate voltage drain current	I_{DSS}	—	—	-5	μA	$V_{DS} = -200 \text{ V}$, $V_{GS} = 0$
Gate to source cutoff voltage	$V_{GS(off)}$	-1.0	—	-2.0	V	$V_{DS} = -10 \text{ V}$, $I_D = -1 \text{ mA}$
Static drain to source on state resistance	$R_{DS(on)}$	—	5.0	6.2	Ω	$I_D = -0.25 \text{ A}$, $V_{GS} = -10 \text{ V}$ ^{Note4}
	$R_{DS(on)}$	—	6.0	7.5	Ω	$I_D = -0.25 \text{ A}$, $V_{GS} = -4 \text{ V}$ ^{Note4}
	$R_{DS(on)}$	—	7.0	10.0	Ω	$I_D = -1 \text{ A}$, $V_{GS} = -5 \text{ V}$ ^{Note4}
Forward transfer admittance	$ y_{fs} $	0.29	0.45	—	S	$I_D = -0.25 \text{ A}$, $V_{DS} = -10 \text{ V}$ ^{Note4}
Input capacitance	C_{iss}	—	140	—	pF	$V_{DS} = -10 \text{ V}$
Output capacitance	C_{oss}	—	37	—	pF	$V_{GS} = 0$
Reverse transfer capacitance	C_{rss}	—	10	—	pF	$f = 1 \text{ MHz}$
Turn-on delay time	$t_{d(on)}$	—	12	—	ns	$V_{GS} = -5 \text{ V}$, $I_D = -0.25 \text{ A}$
Rise time	t_r	—	9	—	ns	$V_{DD} \cong -30 \text{ V}$
Turn-off delay time	$t_{d(off)}$	—	25	—	ns	
Fall time	t_f	—	15	—	ns	
Body-drain diode forward voltage	V_{DF}	—	-0.9	-1.4	V	$I_F = -0.25 \text{ A}$, $V_{GS} = 0$ ^{Note4}

Notes: 4. Pulse test

Package Dimensions



Ordering Information

Part No.	Quantity	Shipping Container
HAT1065T-EL-E	3000 pcs	Taping

Notes:

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Renesas Technology America, Inc.
450 Holger Way, San Jose, CA 95134-1368, U.S.A
Tel: <1> (408) 382-7500, Fax: <1> (408) 382-7501

Renesas Technology Europe Limited
Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K.
Tel: <44> (1628) 585-100, Fax: <44> (1628) 585-900

Renesas Technology (Shanghai) Co., Ltd.
Unit 204, 205, AZIACenter, No.1233 Lujiazui Ring Rd, Pudong District, Shanghai, China 200120
Tel: <86> (21) 5877-1818, Fax: <86> (21) 6887-7898

Renesas Technology Hong Kong Ltd.
7th Floor, North Tower, World Finance Centre, Harbour City, 1 Canton Road, Tsimshatsui, Kowloon, Hong Kong
Tel: <852> 2265-6688, Fax: <852> 2730-6071

Renesas Technology Taiwan Co., Ltd.
10th Floor, No.99, Fushing North Road, Taipei, Taiwan
Tel: <886> (2) 2715-2888, Fax: <886> (2) 2713-2999

Renesas Technology Singapore Pte. Ltd.
1 Harbour Front Avenue, #06-10, Keppel Bay Tower, Singapore 098632
Tel: <65> 6213-0200, Fax: <65> 6278-8001

Renesas Technology Korea Co., Ltd.
Kukje Center Bldg. 18th Fl., 191, 2-ka, Hangang-ro, Yongsan-ku, Seoul 140-702, Korea
Tel: <82> (2) 796-3115, Fax: <82> (2) 796-2145

Renesas Technology Malaysia Sdn. Bhd
Unit 906, Block B, Menara Amcorp, Amcorp Trade Centre, No.18, Jalan Persiaran Barat, 46050 Petaling Jaya, Selangor Darul Ehsan, Malaysia
Tel: <603> 7955-9390, Fax: <603> 7955-9510