HAT1065T

Silicon P Channel MOS FET
High Speed Power Switching

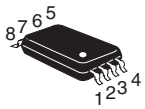
REJ03G0161-0200
Rev.2.00
Aug 06, 2007

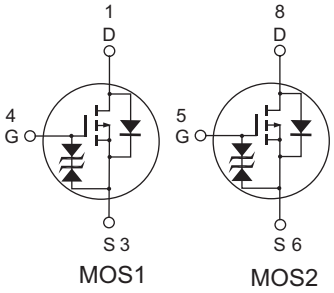
Features

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

Outline

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





1, 8	Drain
3, 6	Source
4, 5	Gate
2, 7	NC

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	Pch Note2	1	W
Channel dissipation	Pch Note3	1.5	W
Channel temperature	Tch	150	°C
Storage temperature	Tstg	–55 to +150	°C

Notes: 1. PW ≤ 10 µs, duty cycle ≤ 1 %
2. 1 Drive operation ; When using the glass epoxy board (FR4 40 x 40 x 1.6 mm), PW ≤ 10 s
3. 2 Drive operation ; When using the glass epoxy board (FR4 40 x 40 x 1.6 mm), PW ≤ 10 s

Electrical Characteristics

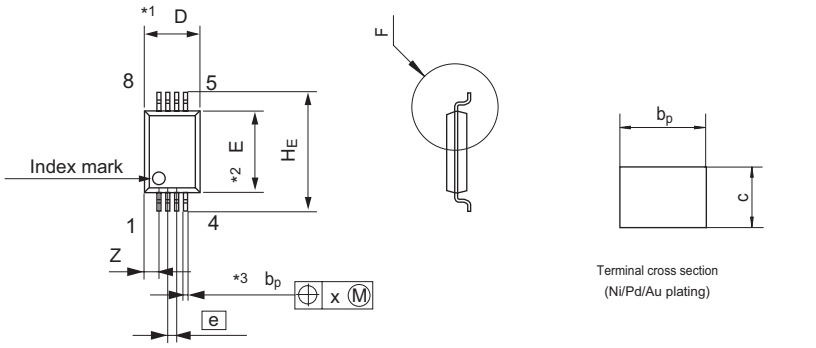
(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	–200	—	—	V	I_D = –10 mA, V_{GS} = 0
Gate to source breakdown voltage	$V_{(BR)GSS}$	±15	—	—	V	I_G = ±100 µA, V_{DS} = 0
Gate to source leak current	I_{GSS}	—	—	±10	µA	V_{GS} = ±12 V, V_{DS} = 0
Zero gate voltage drain current	I_{DSS}	—	—	–5	µA	V_{DS} = –200 V, V_{GS} = 0
Gate to source cutoff voltage	$V_{GS(off)}$	–1.0	—	–2.0	V	V_{DS} = –10 V, I_D = –1 mA
Static drain to source on state resistance	$R_{DS(on)}$	—	5.0	6.2	Ω	I_D = –0.25 A, V_{GS} = –10 V [Note4]
	$R_{DS(on)}$	—	6.0	7.5	Ω	I_D = –0.25 A, V_{GS} = –4 V [Note4]
	$R_{DS(on)}$	—	7.0	10.0	Ω	I_D = –1 A, V_{GS} = –5 V [Note4]
Forward transfer admittance	$\|y_{fs}\|$	0.29	0.45	—	S	I_D = –0.25 A, V_{DS} = –10 V [Note4]
Input capacitance	Ciss	—	140	—	pF	V_{DS} = –10 V V_{GS} = 0 f = 1 MHz
Output capacitance	Coss	—	37	—	pF	
Reverse transfer capacitance	Crss	—	10	—	pF	
Turn-on delay time	$t_{d(on)}$	—	12	—	ns	V_{GS} = –5 V, I_D = –0.25 A V_{DD} ≅ –30 V
Rise time	t_r	—	9	—	ns	
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 A, V_{GS} = 0 [Note4]

Notes: 4. Pulse test

Package Dimensions

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
TSSOP-8	P-TSSOP8-4.4 × 3-0.65	PTSP0008JB-B	TTP-8DV	0.034g



NOTE)
1. DIMENSIONS "*1(Nom)" AND "*2" DO NOT INCLUDE MOLD FLASH.
2. DIMENSION "*3" DOES NOT INCLUDE TRIM OFFSET.

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
D	—	3.00	3.30
E	—	4.40	—
A_2	—	—	—
A_1	0.03	0.07	0.10
A	—	—	1.10
b_p	0.15	0.20	0.25
b_1	—	—	—
c	0.10	0.15	0.20
c_1	—	—	—
θ	0°	—	8°
H_E	6.20	6.40	6.60
e	—	0.65	—
x	—	—	0.13
y	—	—	0.10
Z	—	—	0.805
L	0.40	0.50	0.60
L_1	—	1.0	—

Ordering Information

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

Renesas Technology Corp. Sales Strategic Planning Div. Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan

RENESAS SALES OFFICES

http://www.renesas.com

Refer to "**http://www.renesas.com/en/network**" for the latest and detailed information.

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

Colophon .7.0