
HAT1032T

Silicon P Channel Power MOS FET
High Speed Power Switching

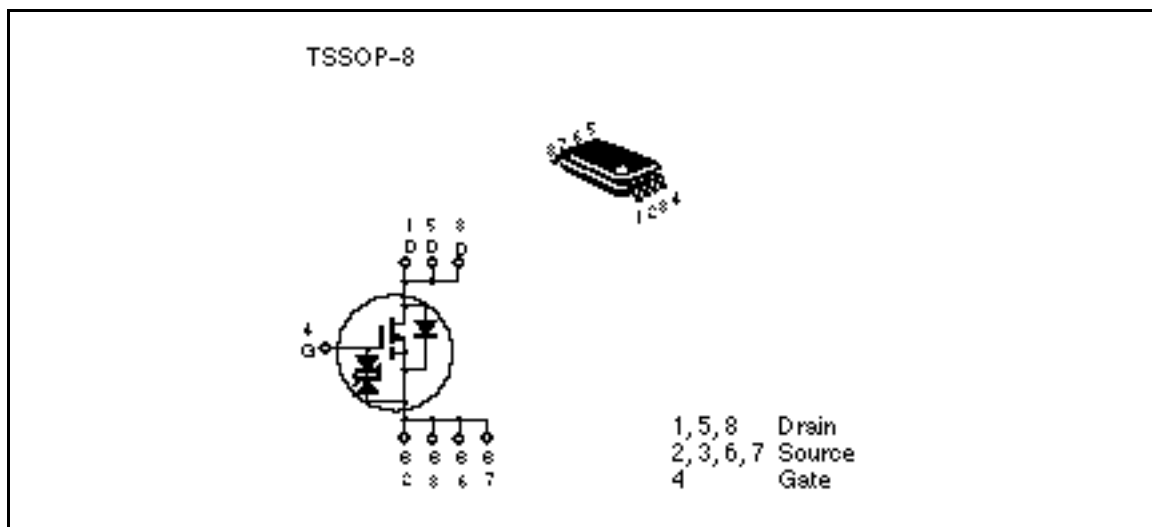
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ADE-208-531 C
Target Specification 4th. Edition

Features

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

Outline



HAT1032T

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V _{DSS}	−12	V
Gate to source voltage	V _{GSS}	±10	V
Drain current	I _D	−4	A
Drain peak current	I _{D(pulse)} ^{*1}	−32	A
Body to drain diode reverse drain current	I _{DR}	−4	A
Channel dissipation	P _{ch} ^{*2}	1.3	W
Channel temperature	T _{ch}	150	°C
Storage temperature	T _{stg}	−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

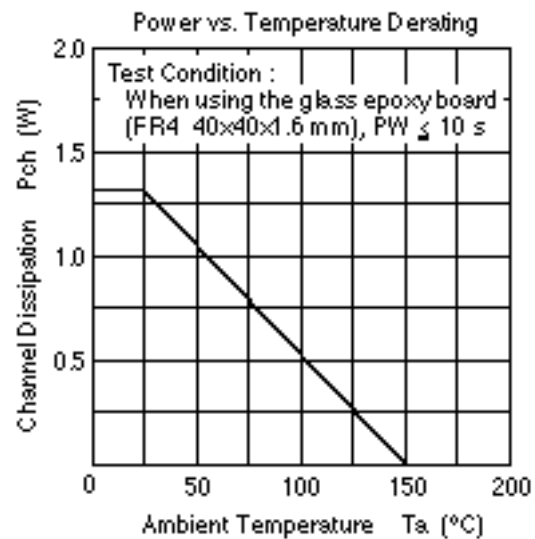
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	-12	—	—	V	$I_D = -10mA, V_{GS} = 0$
Gate to source breakdown voltage	$V_{(BR)GSS}$	± 10	—	—	V	$I_G = \pm 100mA, V_{DS} = 0$
Gate to source leak current	I_{GSS}	—	—	± 10	nA	$V_{GS} = \pm 8V, V_{DS} = 0$
Zero gate voltage drain current	I_{DSS}	—	—	-1	nA	$V_{DS} = -12V, V_{GS} = 0$
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	$R_{DS(on)}$	—	0.045	0.060	W	$I_D = -2A, V_{GS} = -4V^{*1}$
	$R_{DS(on)}$	—	0.060	0.085	W	$I_D = -2A, V_{GS} = -2.5V^{*1}$
Forward transfer admittance	$ y_{fs} $	5.5	8.5	—	S	$I_D = -2A, V_{DS} = -4V^{*1}$
Input capacitance	C_{iss}	—	1000	—	pF	$V_{DS} = -10V$
Output capacitance	C_{oss}	—	690	—	pF	$V_{GS} = 0$
Reverse transfer capacitance	C_{rss}	—	250	—	pF	$f = 1MHz$
Turn-on delay time	$t_{d(on)}$	—	14	—	ns	$V_{GS} = -4V, I_D = -2A$
Rise time	t_r	—	120	—	ns	$V_{DD} @ -10V$
Turn-off delay time	$t_{d(off)}$	—	245	—	ns	
Fall time	t_f	—	290	—	ns	
Body to drain diode forward voltage	V_{DF}	—	-0.80	-1.04	V	$I_F = -4A, V_{GS} = 0^{*1}$
Body to drain diode reverse recovery time	t_{rr}	—	65	—	ns	$I_F = -4A, V_{GS} = 0$ $diF/dt = 20A/\mu s$

Note: 1. Pulse test

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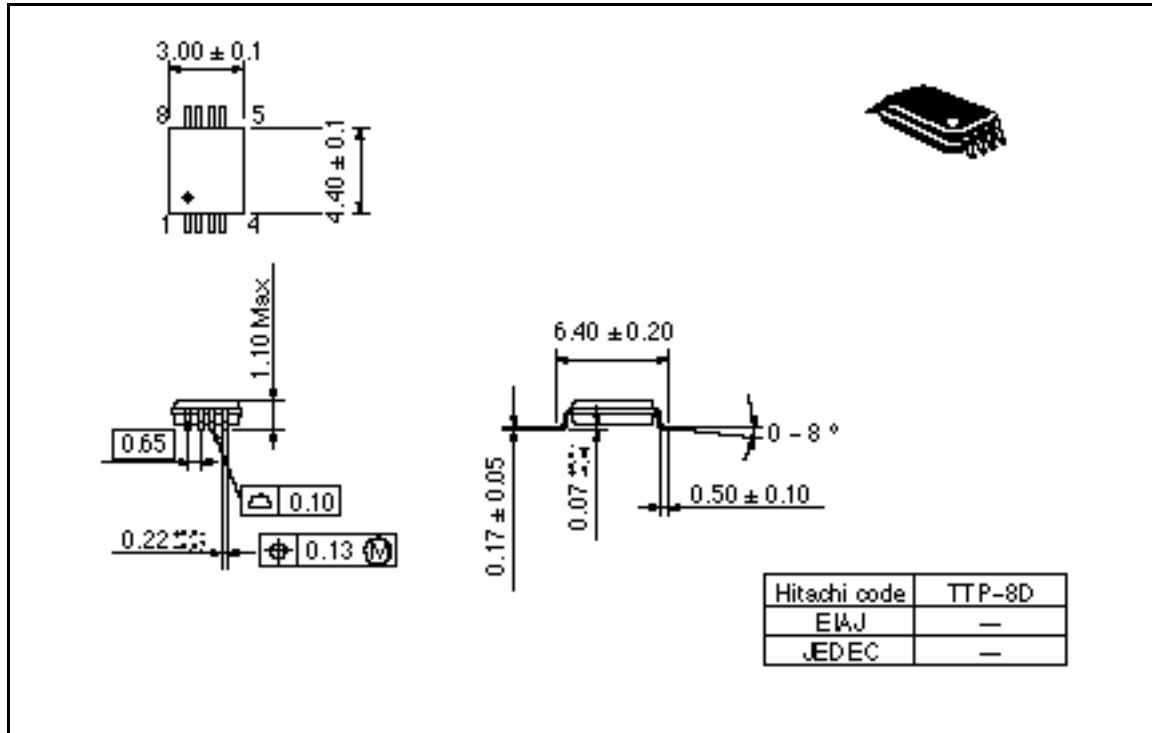
Main Characteristics



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Package Dimensions

Unit: mm



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