
2SK2928

Silicon N Channel MOS FET
High Speed Power Switching

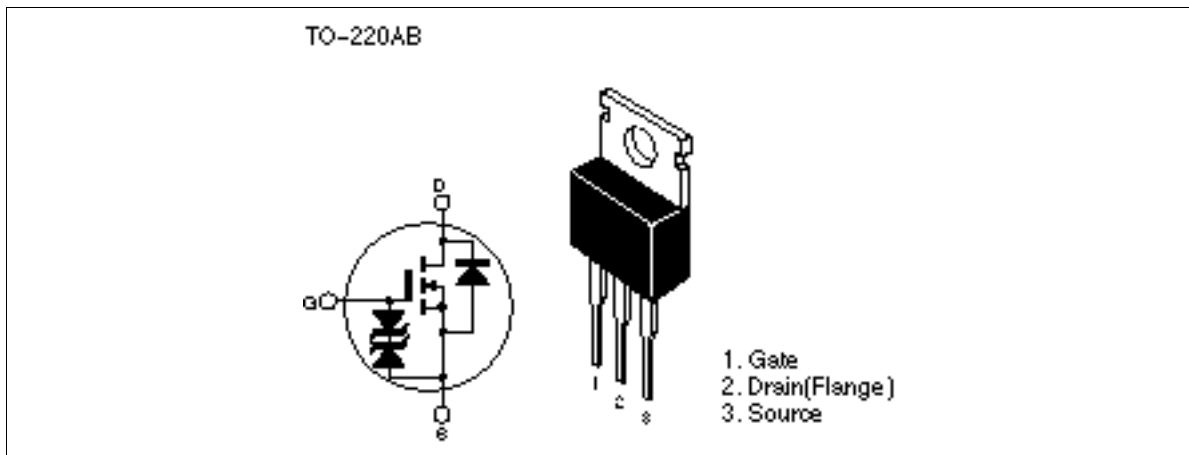
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ADE-208-551
Target Specification 1st. Edition

Features

- Low on-resistance
 $R_{DS} = 0.040 \Omega$ typ.
- High speed switching
- 4V gate drive device can be driven from 5V source

Outline



2SK2928

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V _{DSS}	60	V
Gate to source voltage	V _{GSS}	±20	V
Drain current	I _D	15	A
Drain peak current	I _{D(pulse)} * ¹	60	A
Body to drain diode reverse drain current	I _{DR}	15	A
Avalanche current	I _{AP} * ³	15	A
Avalanche energy	E _{AR} * ³	19	mJ
Channel dissipation	P _{ch} * ²	40	W
Channel temperature	T _{ch}	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

Notes: 1. PW ≤ 10μs, duty cycle ≤ 1 %

2. Value at T_c = 25°C

3. Value at T_{ch} = 25°C, R_g = 50Ω

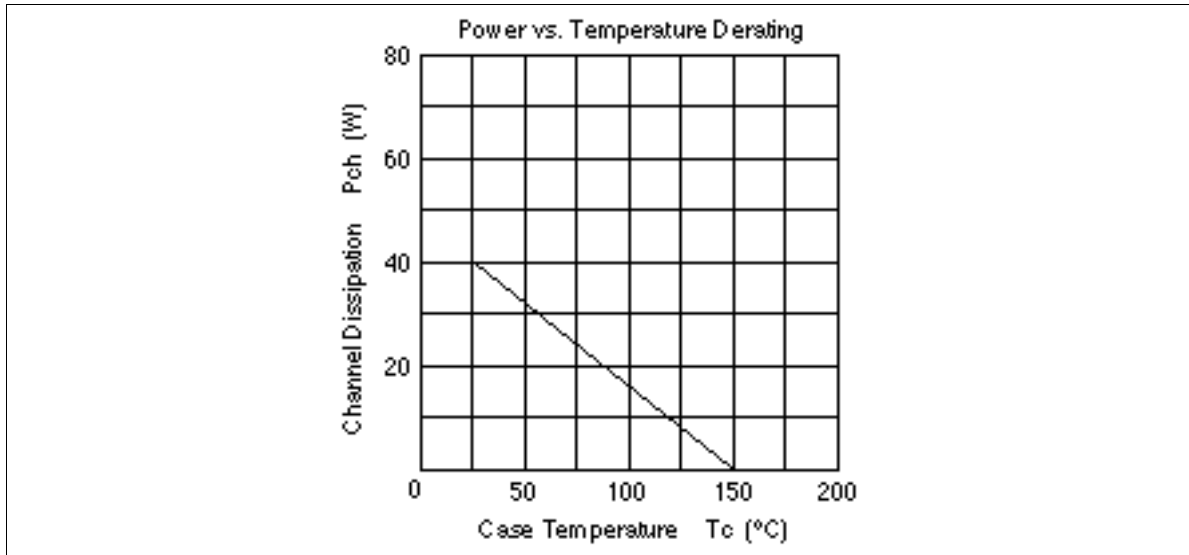
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	60	—	—	V	$I_D = 10\text{mA}$, $V_{GS} = 0$
Gate to source breakdown voltage	$V_{(BR)GSS}$	± 20	—	—	V	$I_G = \pm 100\mu\text{A}$, $V_{DS} = 0$
Gate to source leak current	I_{GSS}	—	—	± 10	μA	$V_{GS} = \pm 16\text{V}$, $V_{DS} = 0$
Zero gate voltage drain current	I_{DSS}	—	—	10	μA	$V_{DS} = 60\text{V}$, $V_{GS} = 0$
Gate to source cutoff voltage	$V_{GS(off)}$	1.5	—	2.5	V	$I_D = 1\text{mA}$, $V_{DS} = 10\text{V}$
Static drain to source on state resistance	$R_{DS(on)}$	—	0.040	0.052	Ω	$I_D = 8\text{A}$, $V_{GS} = 10\text{V}^{*1}$
	$R_{DS(on)}$	—	0.060	0.105	Ω	$I_D = 8\text{A}$, $V_{GS} = 4\text{V}^{*1}$
Forward transfer admittance	$ y_{fs} $	10	16	—	S	$I_D = 8\text{A}$, $V_{DS} = 10\text{V}^{*1}$
Input capacitance	C_{iss}	—	500	—	pF	$V_{DS} = 10\text{V}$
Output capacitance	C_{oss}	—	260	—	pF	$V_{GS} = 0$
Reverse transfer capacitance	C_{rss}	—	110	—	pF	$f = 1\text{MHz}$
Turn-on delay time	$t_{d(on)}$	—	10	—	ns	$I_D = 8\text{A}$, $V_{GS} = 10\text{V}$
Rise time	t_r	—	80	—	ns	$R_L = 3.75\Omega$
Turn-off delay time	$t_{d(off)}$	—	100	—	ns	
Fall time	t_f	—	110	—	ns	
Body to drain diode forward voltage	V_{DF}	—	0.9	—	V	$I_F = 15\text{A}$, $V_{GS} = 0$
Body to drain diode reverse recovery time	t_{rr}	—	50	—	ns	$I_F = 15\text{A}$, $V_{GS} = 0$ $di_F/dt = 50\text{A}/\mu\text{s}$

Note: 1. Pulse test

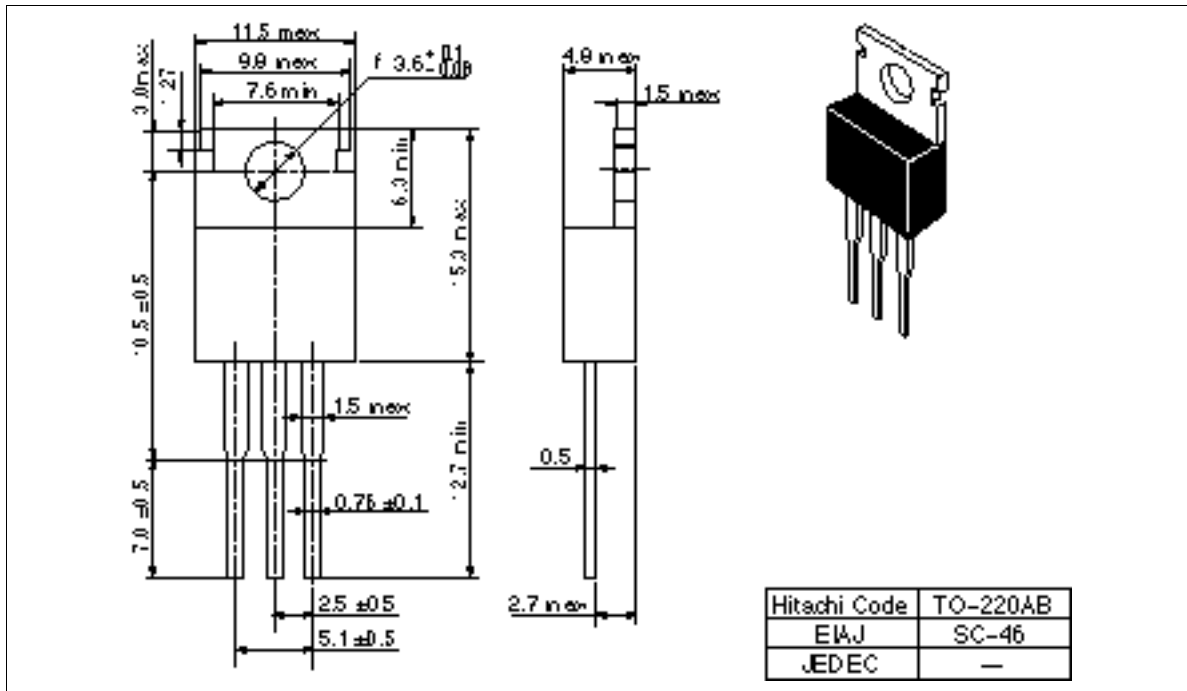
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Main Characteristics



Package Dimentions

Unit: mm



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HITACHI

Hitachi, Ltd.

Semiconductor & IC Div.
Nippon Bldg, 2-5-2, Ohba-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
Brisbane, CA, 94005-1635
U.S.A.
Tel 415-589-8300
Fax 415-589-4207

Hitachi Europe GmbH
Electronic Components Group
Continental Europe
Danneberg Straße 3
D-85622 Feldkirchen
München
Tel 089-9 24 80-0
Fax 089-9 29 30 00

Hitachi Europe Ltd.
Electronic Components Div.
Northern Europe Headquarters
Whitebrook Park
Lower Cookham Road
Maidenhead
Berkshire SL6 3YX
United Kingdom
Tel 0628-585000
Fax 0628-778322

Hitachi Asia Pte. Ltd.
15 Collyer Quay #20-00
Hitachi Tower
Singapore 0104
Tel 535-2100
Fax 535-1533

Hitachi Asia (Hong Kong) Ltd.
Unit 705, North Tower,
World Finance Centre
Harbour City, Canton Road
Tsim Sha Tsui, Kowloon
Hong Kong
Tel 27359218
Fax 27308074