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# 2SJ484

Silicon P-Channel MOS FET  
High Speed Power Switching

# HITACHI

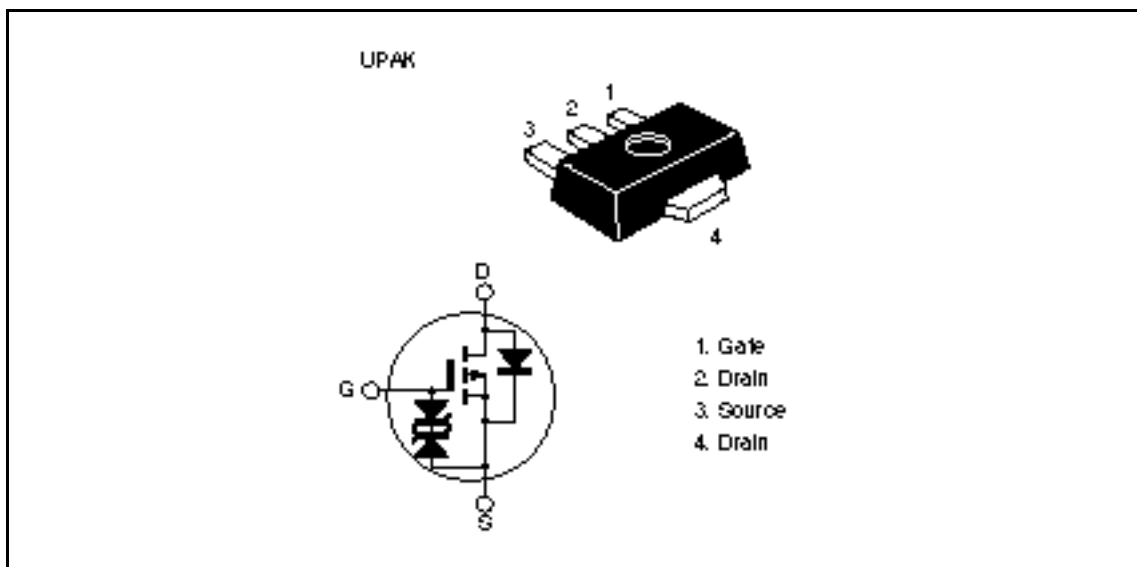
ADE-208-501 A  
2nd. Edition

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## Features

- Low on-resistance  
 $R_{DS(on)} = 0.18$  typ. (at  $V_{GS} = -10V$ ,  $I_D = -1A$ )
- Low drive current
- High speed switching
- 4V gate drive devices.

## Outline



## 2SJ484

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

Item	Symbol	Ratings	Unit
Drain to source voltage	$V_{DSS}$	-30	V
Gate to source voltage	$V_{GSS}$	$\pm 20$	V
Drain current	$I_D$	-2	A
Drain peak current	$I_{D(pulse)}^{*1}$	-4	A
Body to drain diode reverse drain current	$I_{DR}$	-2	A
Channel dissipation	$P_{ch}^{*2}$	1	W
Channel temperature	$T_{ch}$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

Notes: 1. PW 100μs, duty cycle 10 %

2. When using aluminium ceramic board (12.5 x 20 x 0.7 mm)

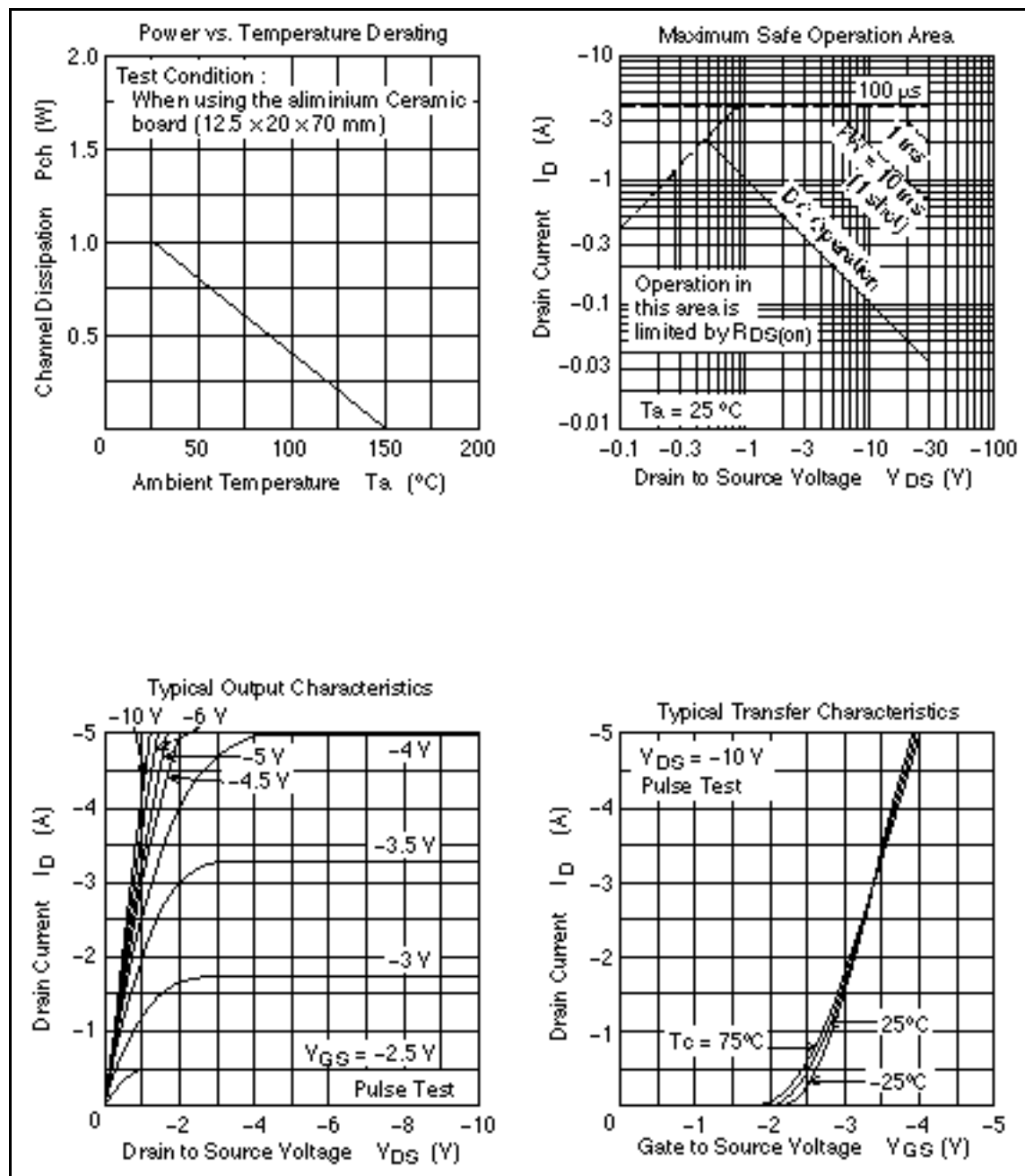
### Electrical Characteristics (Ta = 25°C)

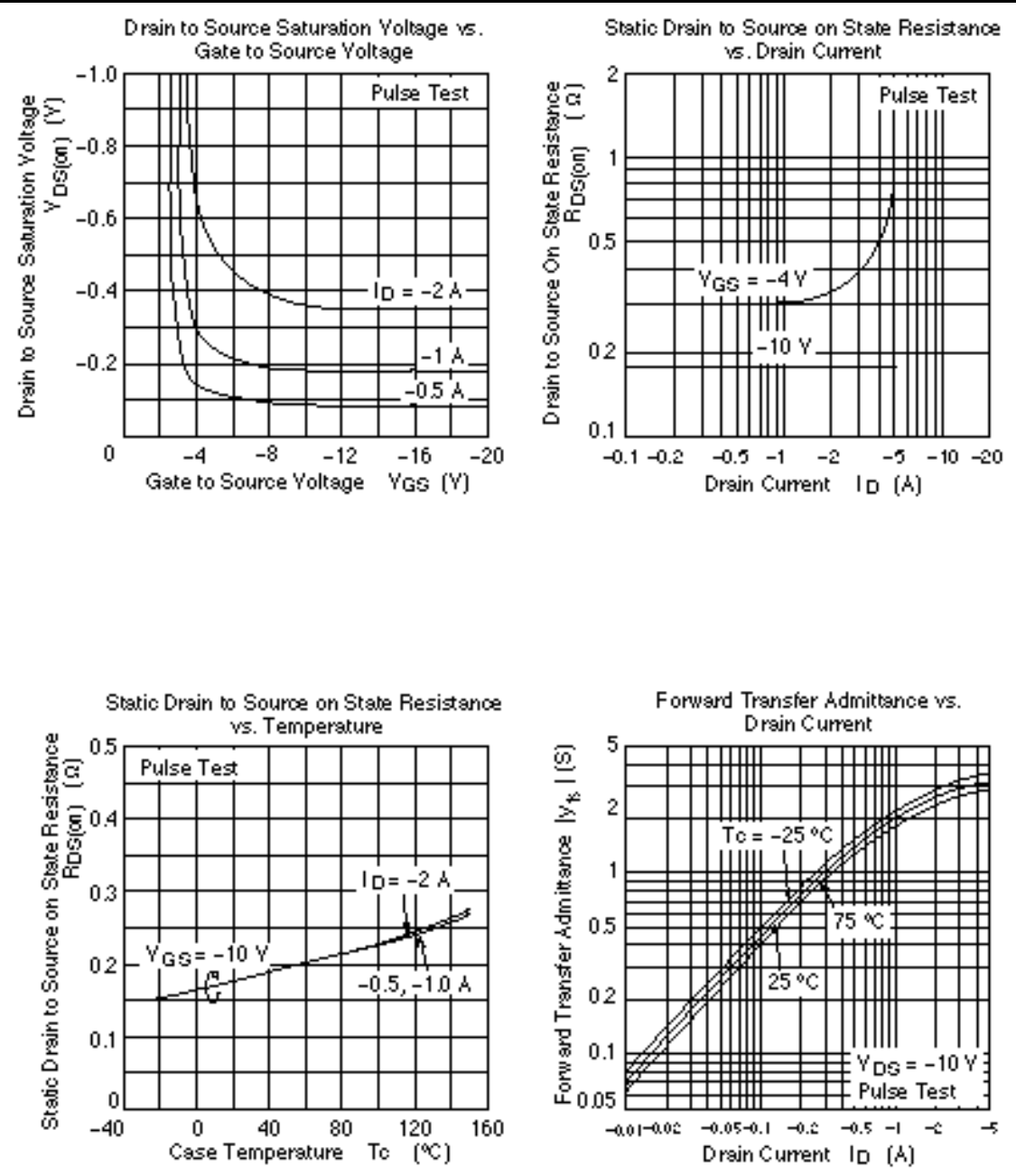
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	-30	—	—	V	$I_D = -10mA, V_{GS} = 0$
Gate to source breakdown voltage	$V_{(BR)GSS}$	$\pm 20$	—	—	V	$I_G = \pm 100\mu A, V_{DS} = 0$
Zero gate voltage drain current	$I_{DSS}$	—	—	-10	μA	$V_{DS} = -30V, V_{GS} = 0$
Gate to source leak current	$I_{GSS}$	—	—	$\pm 10$	μA	$V_{GS} = \pm 16V, V_{DS} = 0$
Gate to source cutoff voltage	$V_{GS(off)}$	-1.0	—	-2.0	V	$I_D = -1mA, V_{DS} = -10V$
Static drain to source on state resistance	$R_{DS(on)}$	—	0.18	0.23		$I_D = -1A, V_{GS} = -10V^{Note3}$
	$R_{DS(on)}$	—	0.3	0.45		$I_D = -1A, V_{GS} = -4V^{*1}$
Forward transfer admittance	$ y_{fs} $	1.2	2.0	—	S	$I_D = -1A, V_{DS} = -10V^{*1}$
Input capacitance	$C_{iss}$	—	230	—	pF	$V_{DS} = -10V$
Output capacitance	$C_{oss}$	—	140	—	pF	$V_{GS} = 0$
Reverse transfer capacitance	$C_{rss}$	—	50	—	pF	$f = 1MHz$
Turn-on delay time	$t_{d(on)}$	—	10	—	ns	$I_D = -1A, R_L = 30$
Rise time	$t_r$	—	30	—	ns	$V_{GS} = -10V$
Turn-off delay time	$t_{d(off)}$	—	35	—	ns	
Fall time	$t_f$	—	30	—	ns	
Body to drain diode forward voltage	$V_{DF}$	—	-0.95	—	V	$I_F = -2A, V_{GS} = 0$
Body to drain diode reverse recovery time	$t_{rr}$	—	60	—	ns	$I_F = -2A, V_{GS} = 0$ $diF/dt = 50A/\mu s$

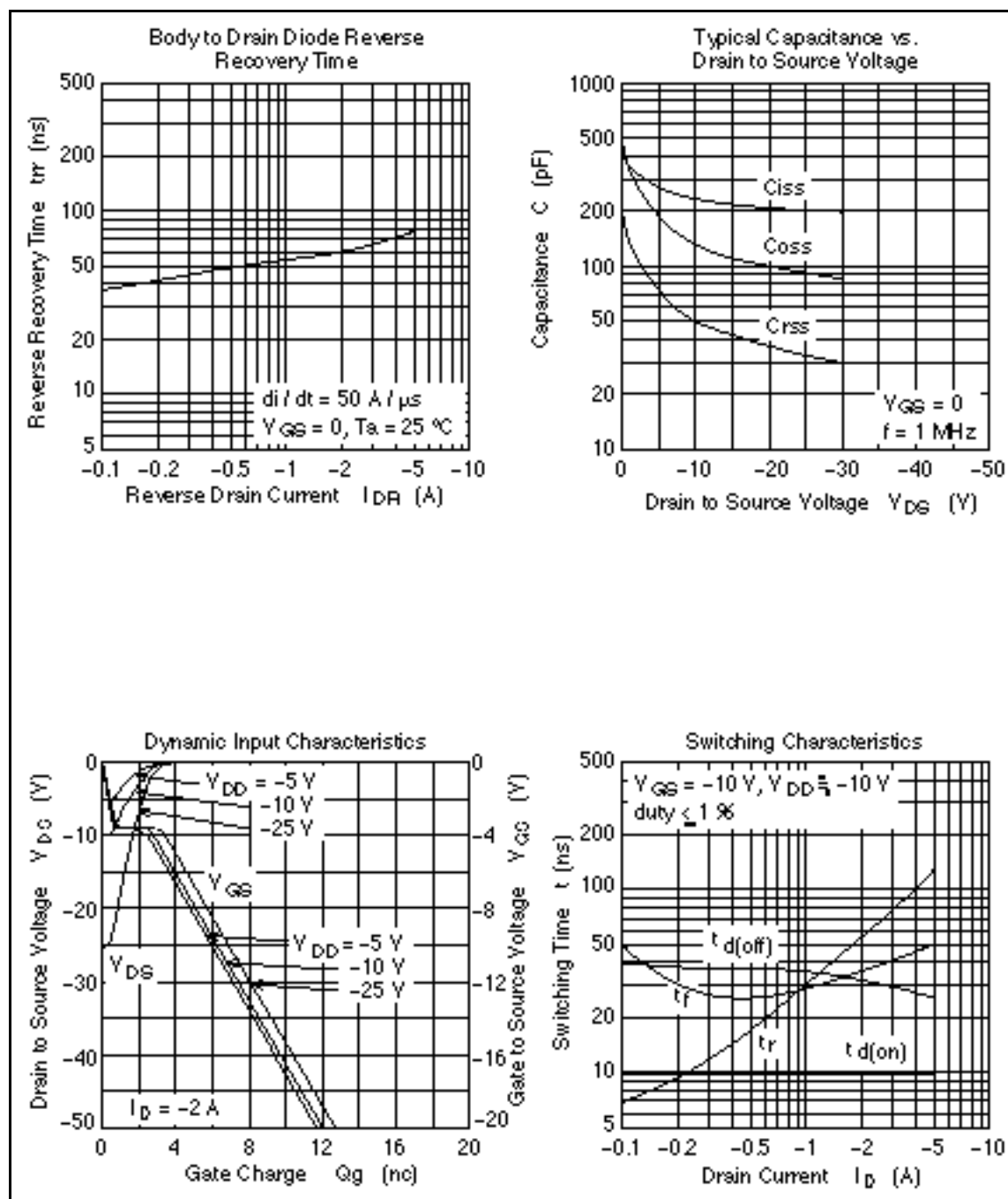
Notes: 1. Pulse test

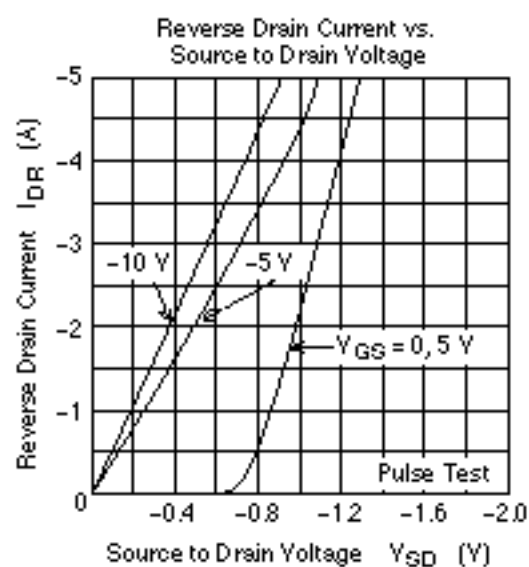
2. Marking is "WY".

## Main Characteristics

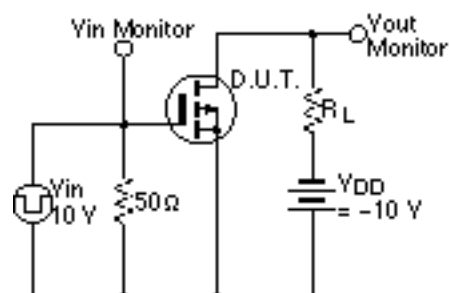




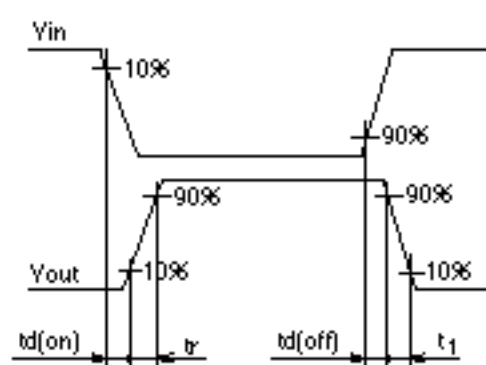




Switching Time Test Circuit

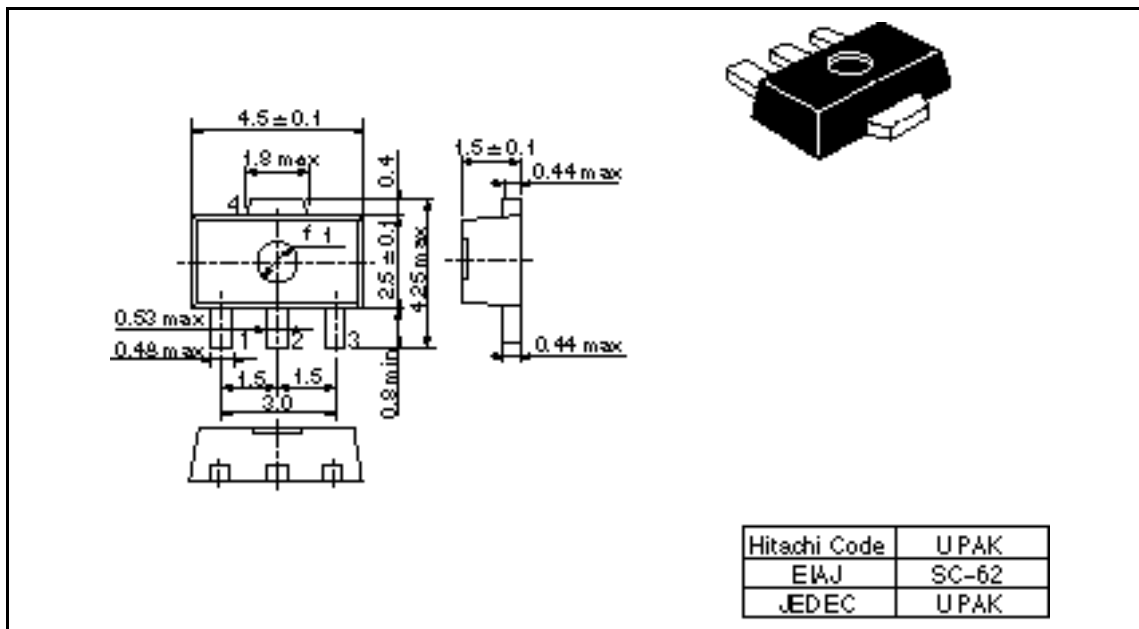


Switching Time Waveform



## Package Dimensions

Unit: mm



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