
2SJ484

Silicon P-Channel MOS FET
High Speed Power Switching

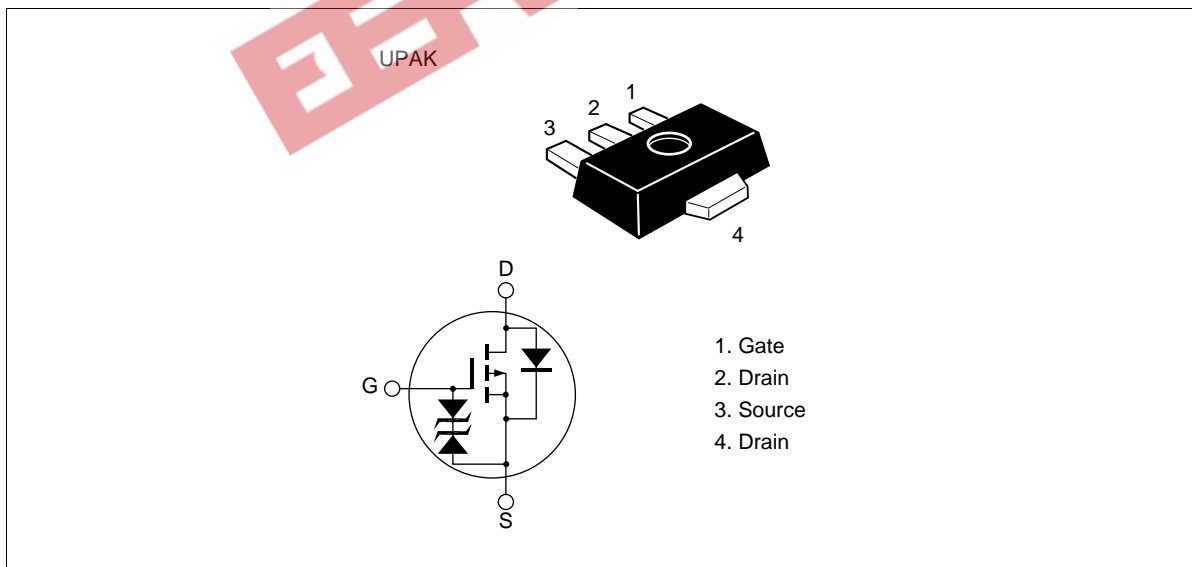
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ADE-208-501 A
2nd. Edition

Features

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

Outline



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Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V_{DSS}	-30	V
Gate to source voltage	V_{GSS}	± 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. $PW \leq 100\mu s$, duty cycle $\leq 10\%$

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

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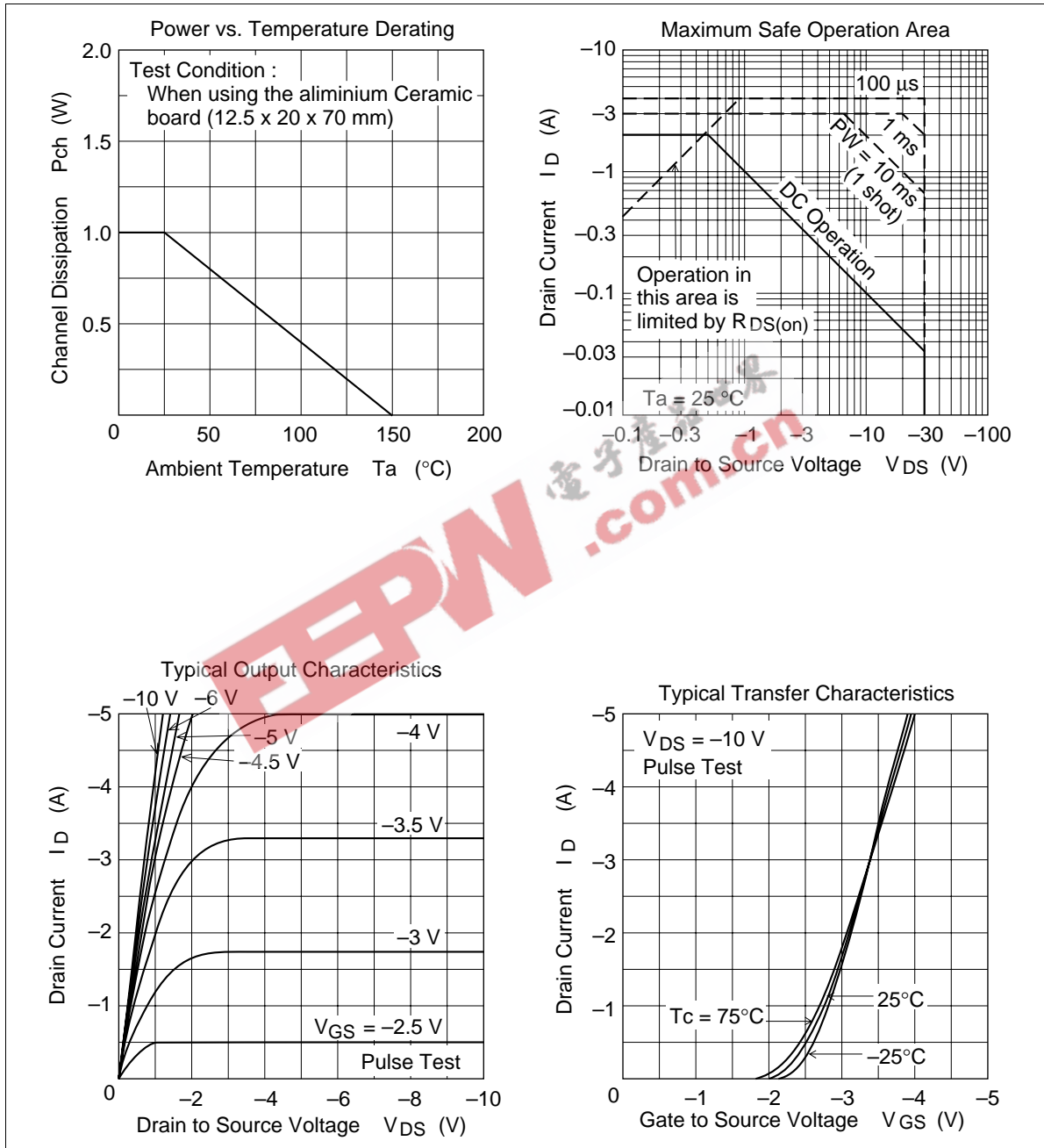
Electrical Characteristics (T_a = 25°C)

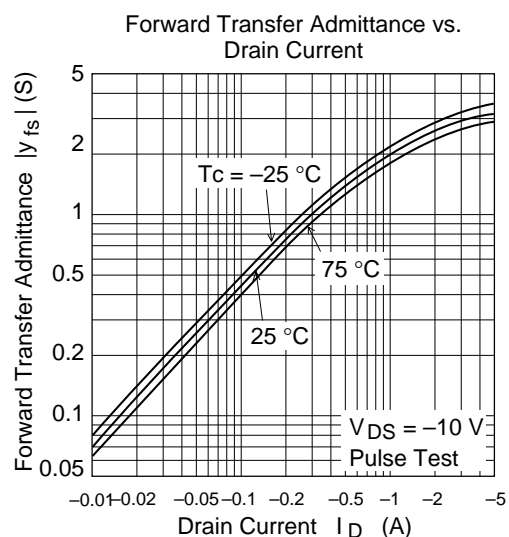
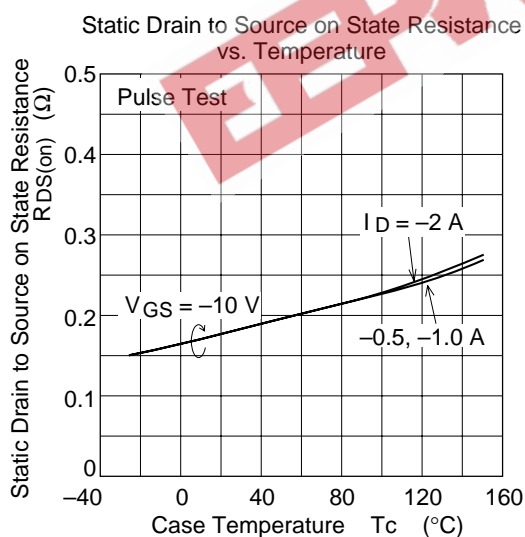
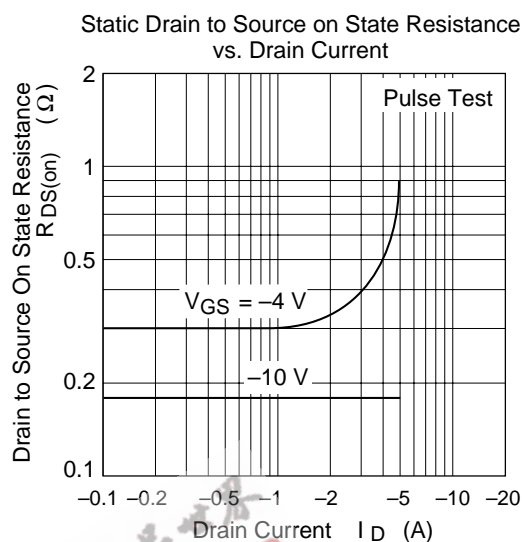
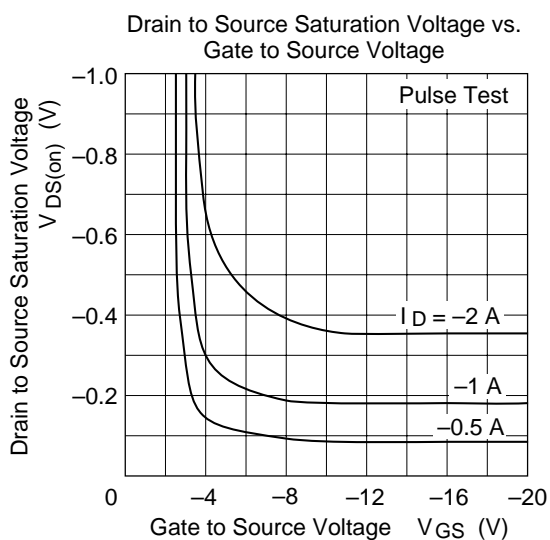
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	-30	—	—	V	$I_D = -10\text{mA}$, $V_{GS} = 0$
Gate to source breakdown voltage	$V_{(BR)GSS}$	±20	—	—	V	$I_G = \pm 100\mu\text{A}$, $V_{DS} = 0$
Zero gate voltage drain current	I_{DSS}	—	—	-10	μA	$V_{DS} = -30\text{V}$,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

Notes: 1. Pulse test
2. Marking is "WY".

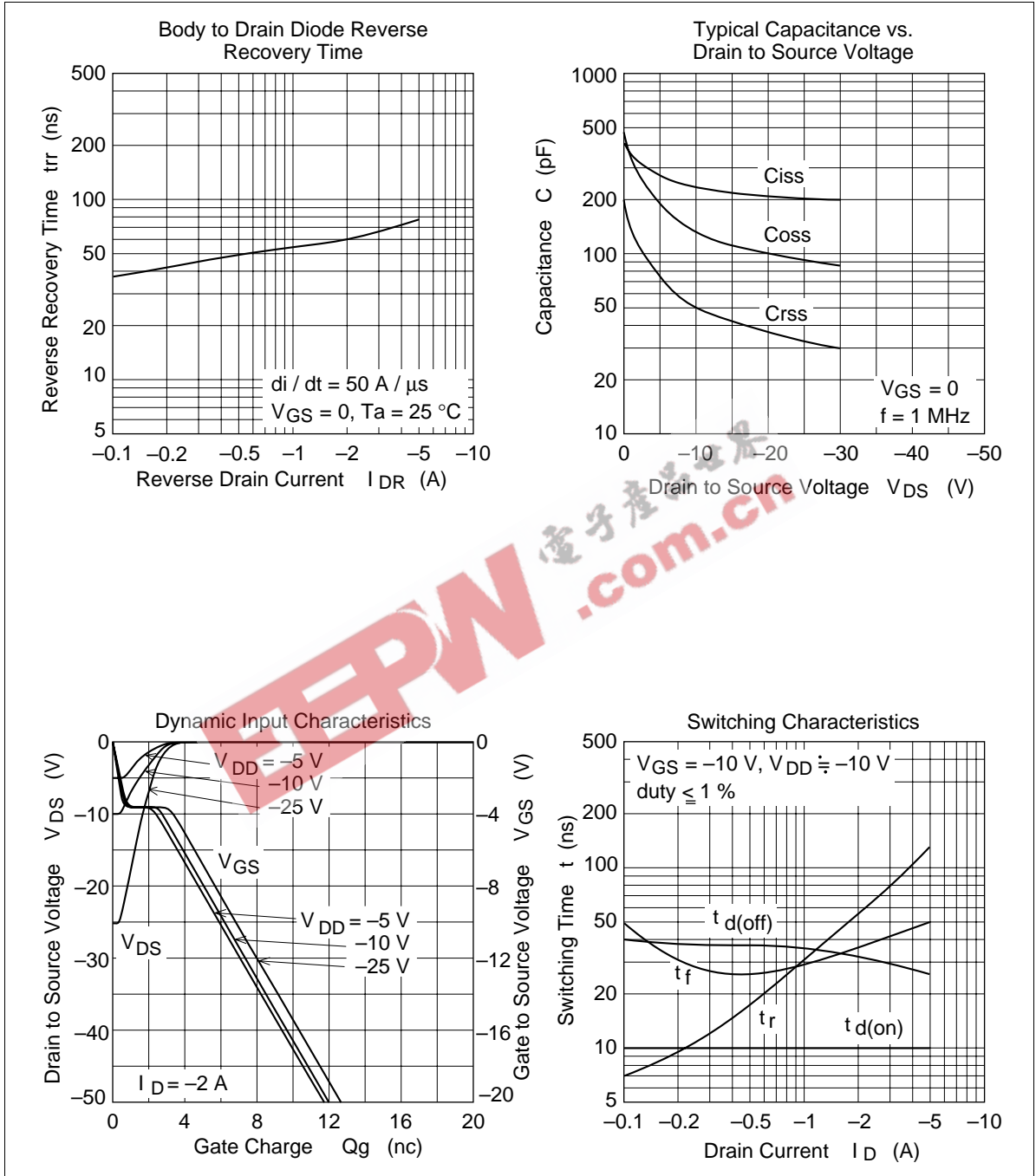
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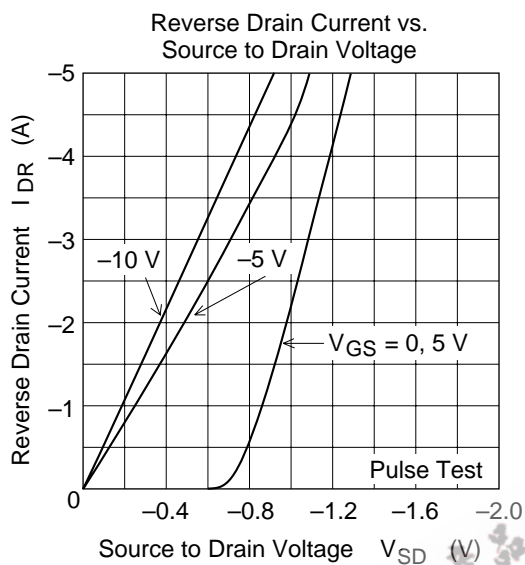
Main Characteristics



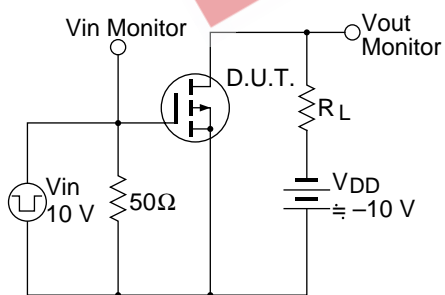


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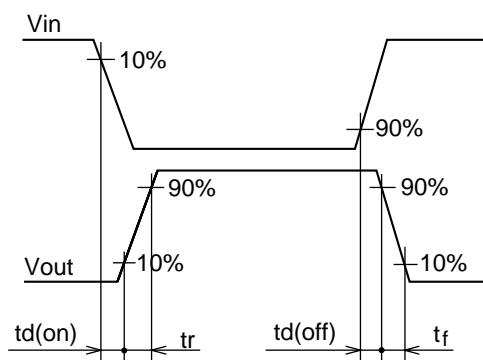




Switching Time Test Circuit



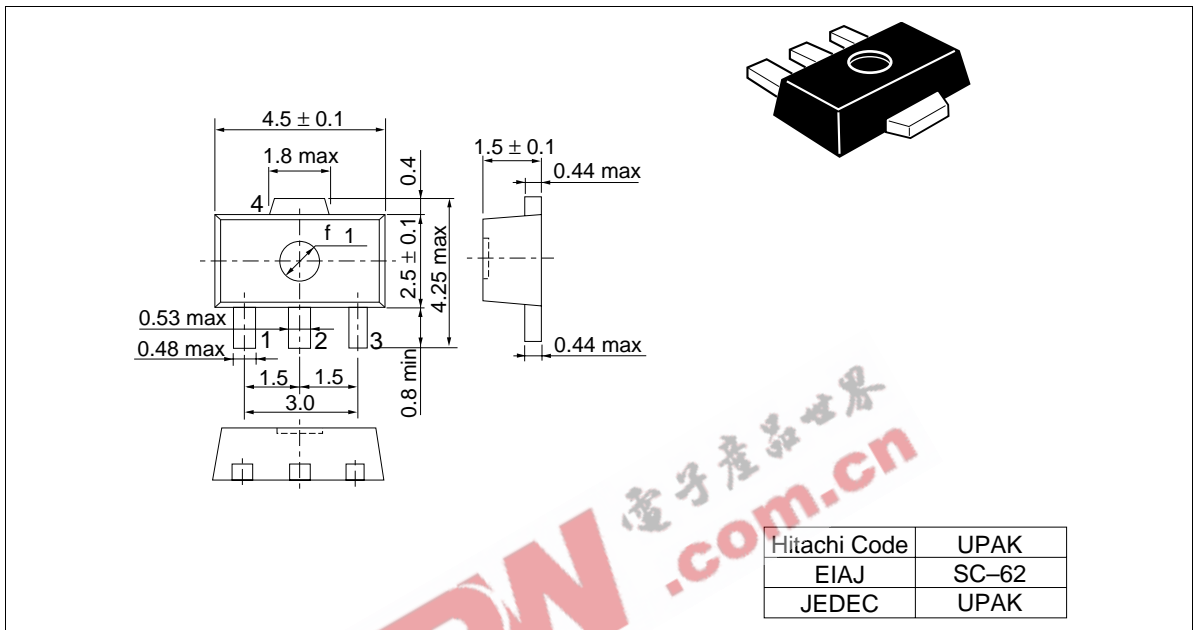
Switching Time Waveform



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Package Dimensions

Unit: mm



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