
2SJ587

Silicon P Channel MOS FET
High Speed Switching

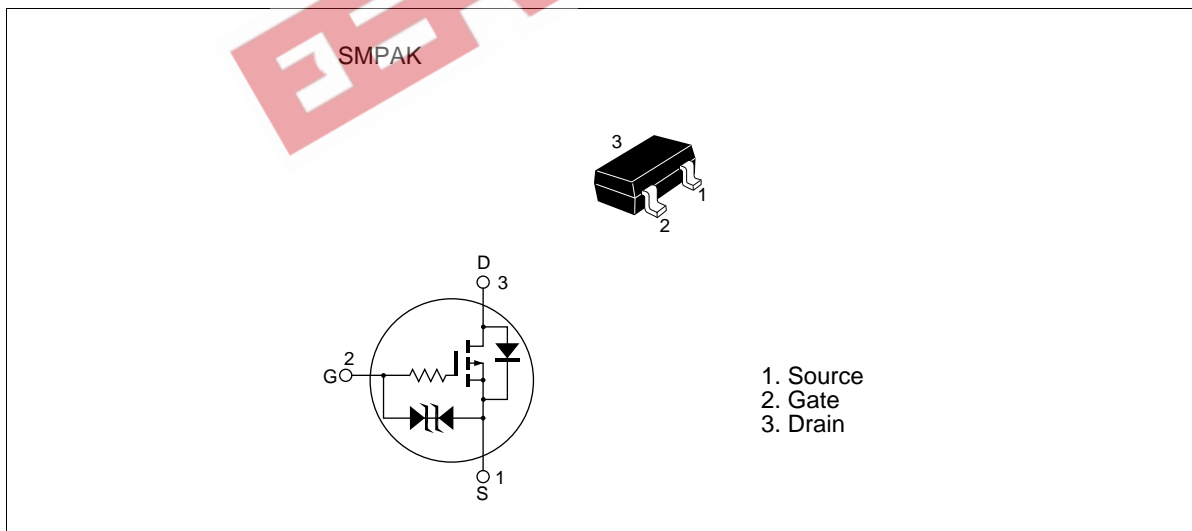
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ADE-208-801 (Z)
1st.Edition.
June 1999

Features

- Low on-resistance
 $R_{DS} = 8.5 \Omega$ typ. ($V_{GS} = -4 \text{ V}$, $I_D = -25 \text{ mA}$)
 $R_{DS} = 15 \Omega$ typ. ($V_{GS} = -2.5 \text{ V}$, $I_D = -10 \text{ mA}$)
- 2.5 V gate drive device.
- Small package (SMPAK)

Outline



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Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V_{DSS}	-20	V
Gate to source voltage	V_{GSS}	± 10	V
Drain current	I_D	-50	mA
Drain peak current	$I_{D(pulse)}$ ^{Note 1}	-200	mA
Body-drain diode reverse drain current	I_{DR}	-50	mA
Channel dissipation	P_{ch} ^{Note 2}	100	mW
Channel temperature	T_{ch}	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

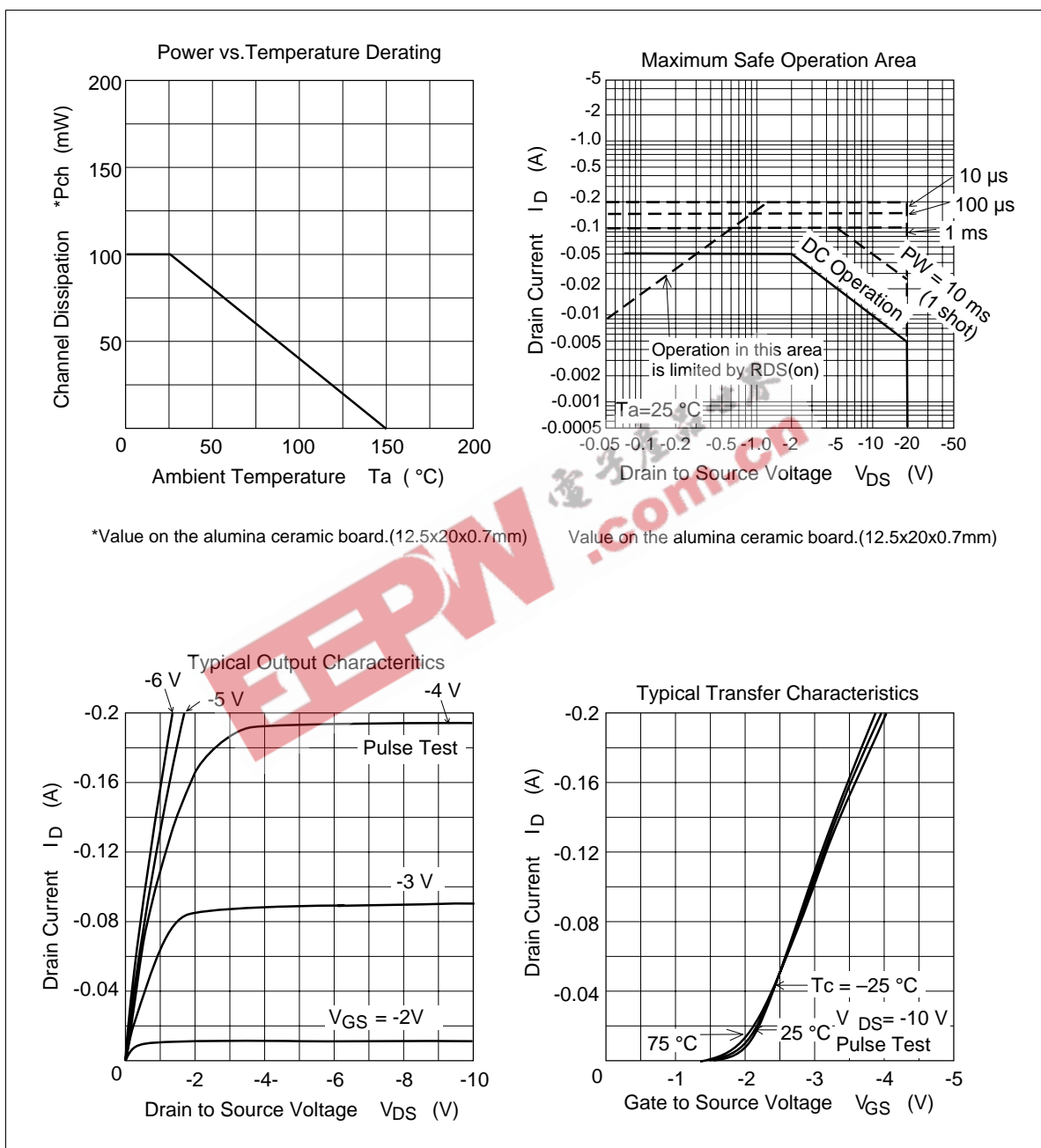
Note: 1. $PW \leq 10 \mu s$, duty cycle $\leq 1\%$
2. Value on the alumina ceramic board (12.5x 20 x0.7 mm)

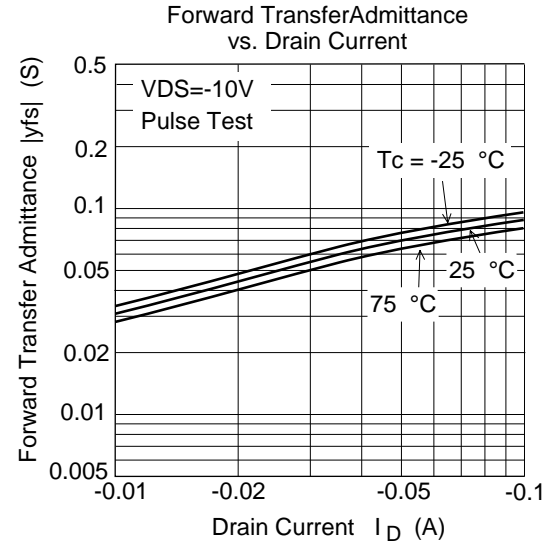
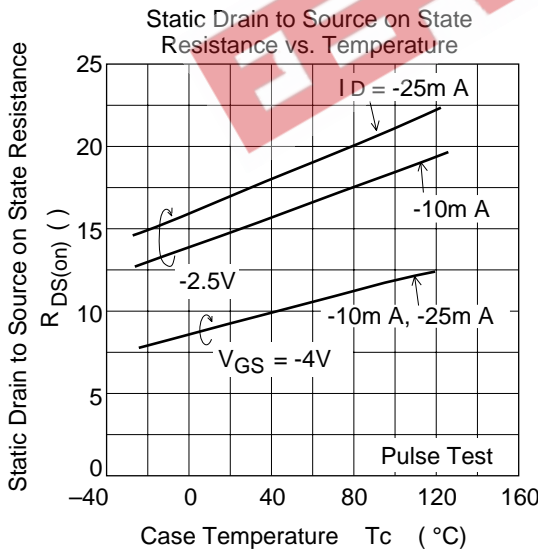
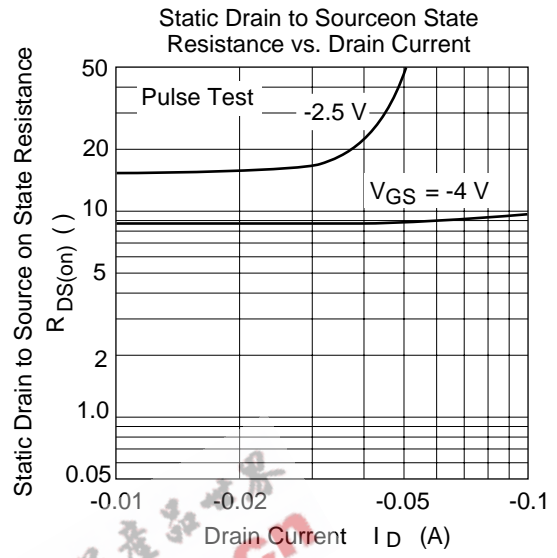
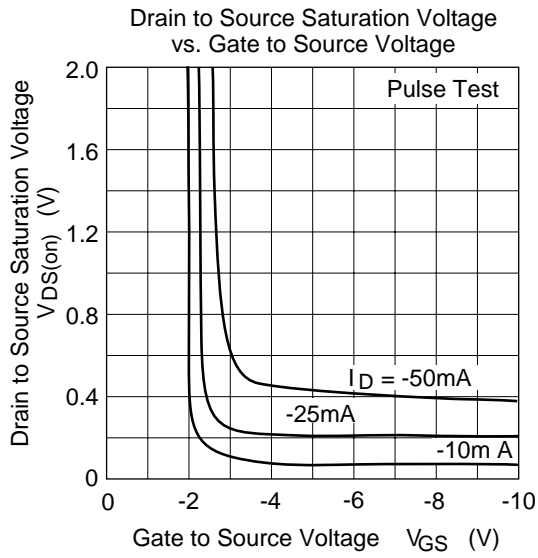
Electrical Characteristics (Ta = 25°C)

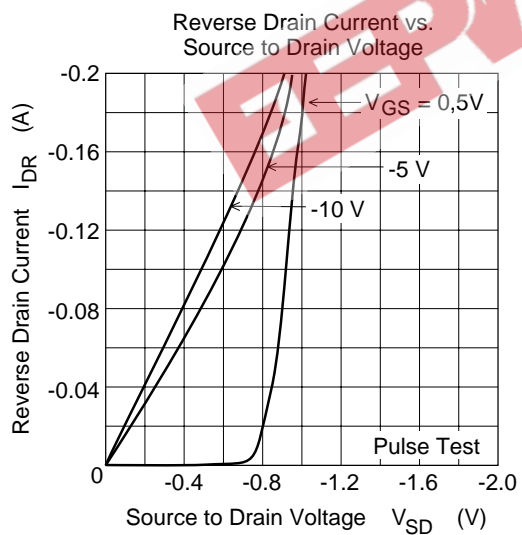
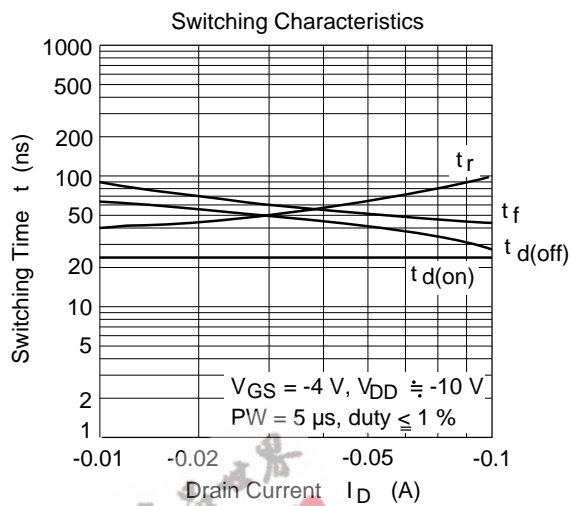
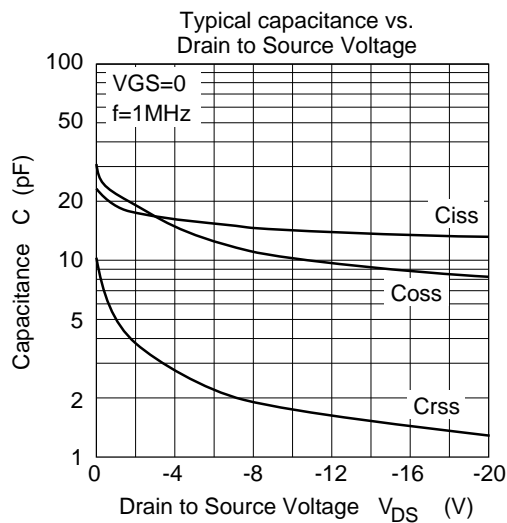
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	-20	—	—	V	$I_D = -100 \mu A, V_{GS} = 0$
Gate to source breakdown voltage	$V_{(BR)GSS}$	± 10	—	—	V	$I_G = \pm 100 \mu A, V_{DS} = 0$
Gate to source leak current	I_{GSS}	—	—	± 5	μA	$V_{GS} = \pm 8 V, V_{DS} = 0$
Zero gate voltage drain current	I_{DSS}	—	—	-1	μA	$V_{DS} = -20 V, V_{GS} = 0$
Gate to source cutoff voltage	$V_{GS(off)}$	-0.8	—	-1.8	V	$I_D = -10 \mu A, V_{DS} = -5 V$
Static drain to source on state resistance	$R_{DS(on)}$	—	4.1	5.0	Ω	$I_D = -25 mA, V_{GS} = -4 V$ ^{Note 3}
	$R_{DS(on)}$	—	6.0	8.5	Ω	$I_D = -10 mA, V_{GS} = -2.5 V$ ^{Note 3}
Forward transfer admittance	$ y_{fs} $	32.5	50	—	mS	$I_D = -25 mA, V_{DS} = -10 V$ ^{Note 3}
Input capacitance	C_{iss}	—	13	—	pF	$V_{DS} = -10 V$
Output capacitance	C_{oss}	—	10	—	pF	$V_{GS} = 0$
Reverse transfer capacitance	C_{rss}	—	1.8	—	pF	$f = 1 MHz$
Turn-on delay time	$t_{d(on)}$	—	22	—	ns	$I_D = -25 mA, V_{GS} = -4 V$
Rise time	t_r	—	48	—	ns	$R_L = 400 \Omega$
Turn-off delay time	$t_{d(off)}$	—	50	—	ns	
Fall time	t_f	—	60	—	ns	

Note: 3. Pulse test
4. Marking is DP

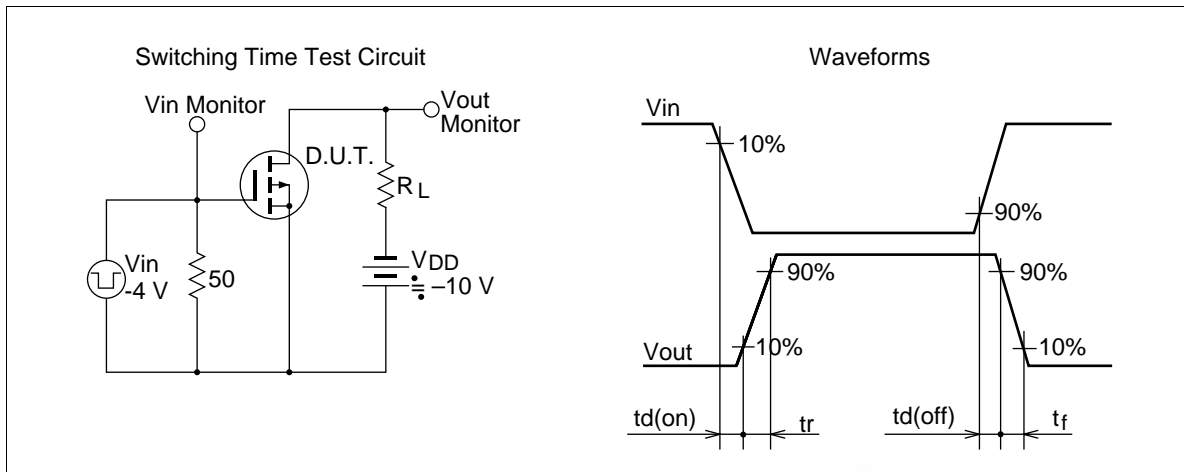
Main Characteristics







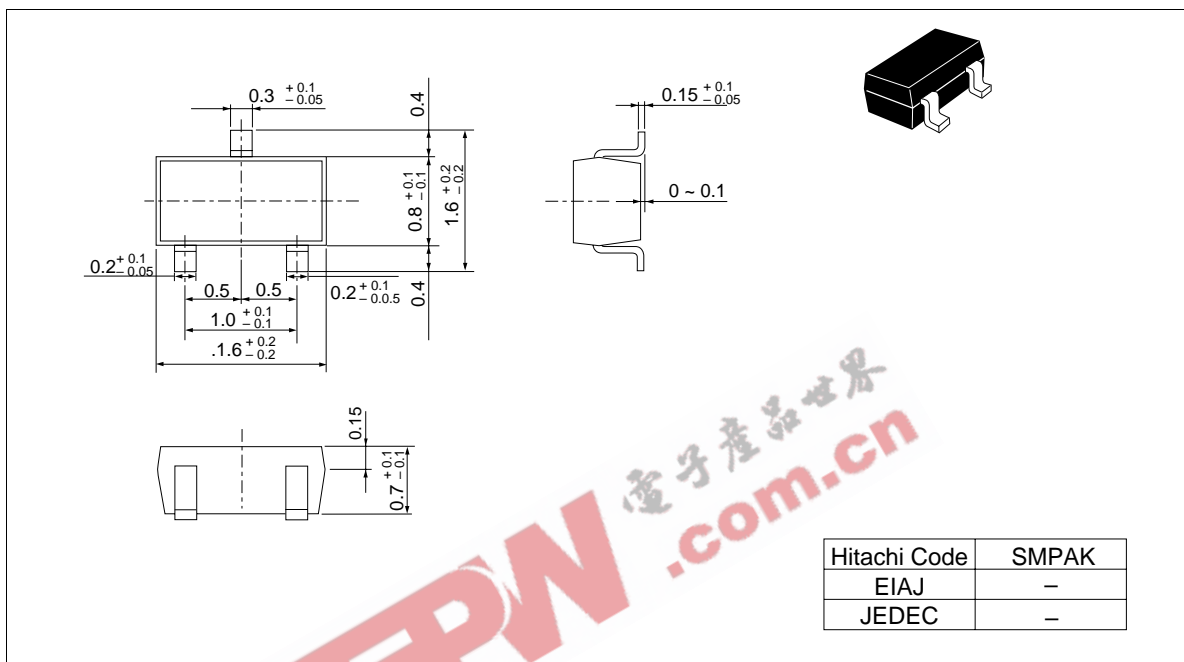
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Package Dimensions

Unit: mm



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