2SJ586

Silicon P Channel MOS FET High Speed Switching

HITACHI

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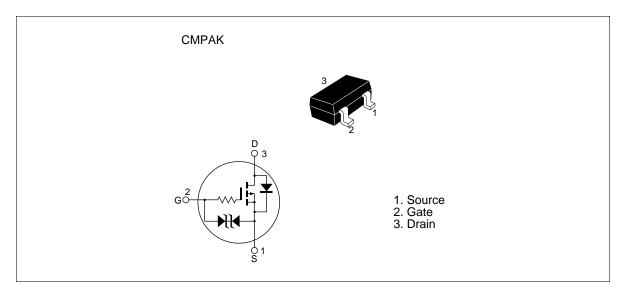
Features

- Low on-resistance
 - $R_{DS} = 4.1~\Omega$ typ. $(V_{GS} = -4~V$, $I_{D} = -50~mA)$

$$R_{DS} = 6.0 \Omega \text{ typ. } (V_{GS} = -2.5 \text{ V}, I_D = -50 \text{ mA})$$

- 2.5 V gate drive device.
- Small package (CMPAK)

Outline





2SJ586

Absolute Maximum Ratings $(Ta = 25^{\circ}C)$

Item	Symbol	Ratings	Unit
Drain to source voltage	$V_{\scriptscriptstyle DSS}$	-20	V
Gate to source voltage	V_{GSS}	±10	V
Drain current	I _D	-100	mA
Drain peak current	Note1 D(pulse)	-400	mA
Body-drain diode reverse drain current	I _{DR}	-100	mA
Channel dissipation	Pch Note 2	300	mW
Channel temperature	Tch	150	°C
Storage temperature	Tstg	-55 to +150	°C

Note: 1. PW \leq 10 μ s, duty cycle \leq 1%

2. Value on the alumina ceramic board (12.5x 20 x0.7 mm)

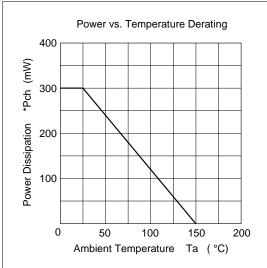
Electrical Characteristics ($Ta = 25^{\circ}C$)

Item	Symbol	Min	Тур	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	μΑ	$V_{GS} = \pm 8 \text{ V}, V_{DS} = 0$
Zero gate voltege drain current	I _{DSS}	_	_	-1	μΑ	$V_{DS} = -20 \text{ V}, V_{GS} = 0$
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	R _{DS(on)}	_	4.1	5.0	Ω	$I_D = -50 \text{ mA}, V_{GS} = -4 \text{ V}^{\text{Note 3}}$
resistance	R _{DS(on)}	_	6.0	8.5	Ω	$I_D = -50 \text{ mA}, V_{GS} = -2.5 \text{ V}^{\text{Note 3}}$
Forward transfer admittance	y _{fs}	94	144	_	mS	$I_D = -50 \text{ mA}, V_{DS} = -10 \text{ V}^{\text{Note 3}}$
Input capacitance	Ciss	_	28	_	pF	V _{DS} = -10 V
Output capacitance	Coss	_	21	_	pF	$V_{GS} = 0$
Reverse transfer capacitance	Crss	_	7	_	pF	f = 1 MHz
Turn-on delay time	t _{d(on)}	_	30	_	ns	$I_D = -50 \text{ mA}, V_{GS} = -4 \text{ V}$
Rise time	t _r	_	90	_	ns	$R_L = 200 \Omega$
Turn-off delay time	t _{d(off)}	_	87	_	ns	
Fall time	t _f	_	97	_	ns	

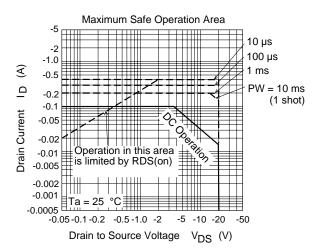
Note: 3. Pulse test

4. Marking is CP

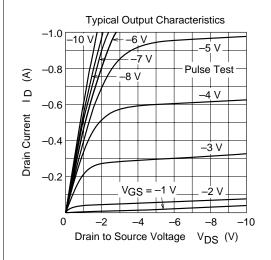
Main Characteristics

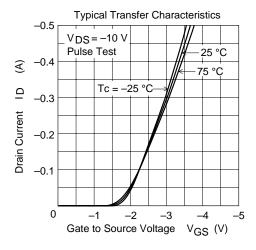


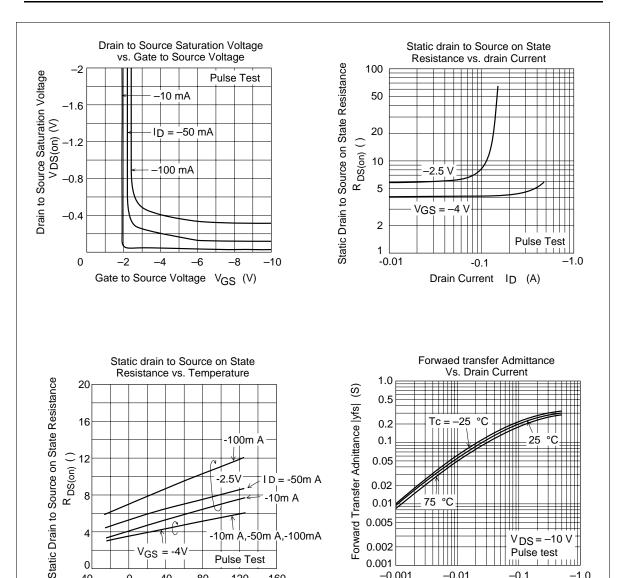
*Value on the alumina ceramic board.(12.5x20x0.7mm)



Value on the alumina ceramic board.(12.5x20x0.7mm)







-0.001

-0.01

-0.1

Drain Current ID (A)

-1.0

-40

40

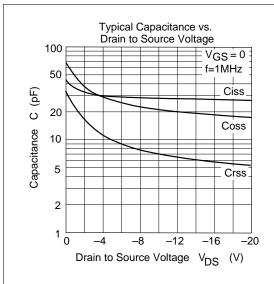
Case Temperature

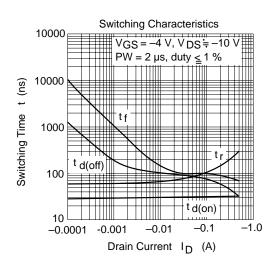
80

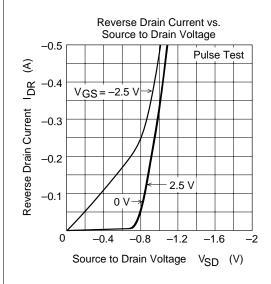
120

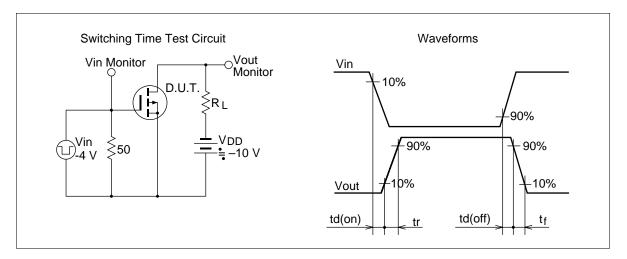
Tc (°C)

160



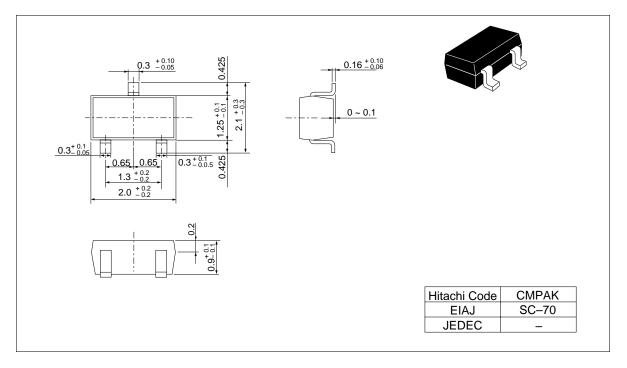






Package Dimensions

Unit: mm



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