

# 2SJ483

Silicon P Channel MOS FET  
High Speed Power Switching

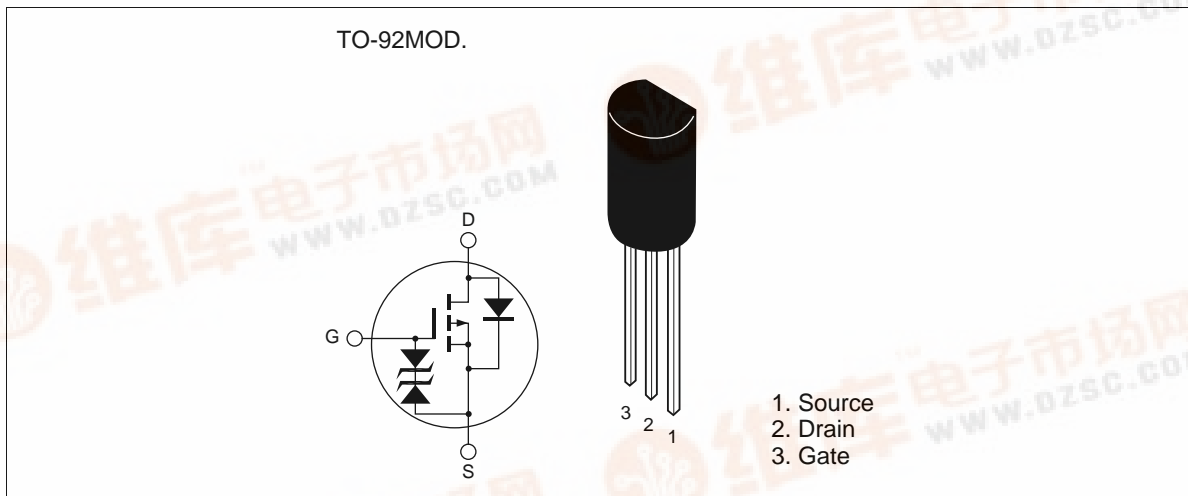
# HITACHI

ADE-208-519  
1st. Edition

## Features

- Low on-resistance  
 $R_{DS(on)} = 0.08\Omega$  typ (at  $V_{GS} = -10$  V,  $I_D = -2.5$  A)
- 4V gate drive devices.
- Large current capacitance  
 $I_D = -5$  A

## Outline



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

Item	Symbol	Ratings	Unit
Drain to source voltage	V <sub>DSS</sub>	-30	V
Gate to source voltage	V <sub>GSS</sub>	±20	V
Drain current	I <sub>D</sub>	-5	A
Drain peak current	I <sub>D(pulse)</sub> <sup>Note1</sup>	-20	A
Body to drain diode reverse drain current	I <sub>DR</sub>	-5	A
Channel dissipation	P <sub>ch</sub>	0.9	W
Channel temperature	T <sub>ch</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

Note: 1. PW ≤ 10μs, duty cycle ≤ 1 %

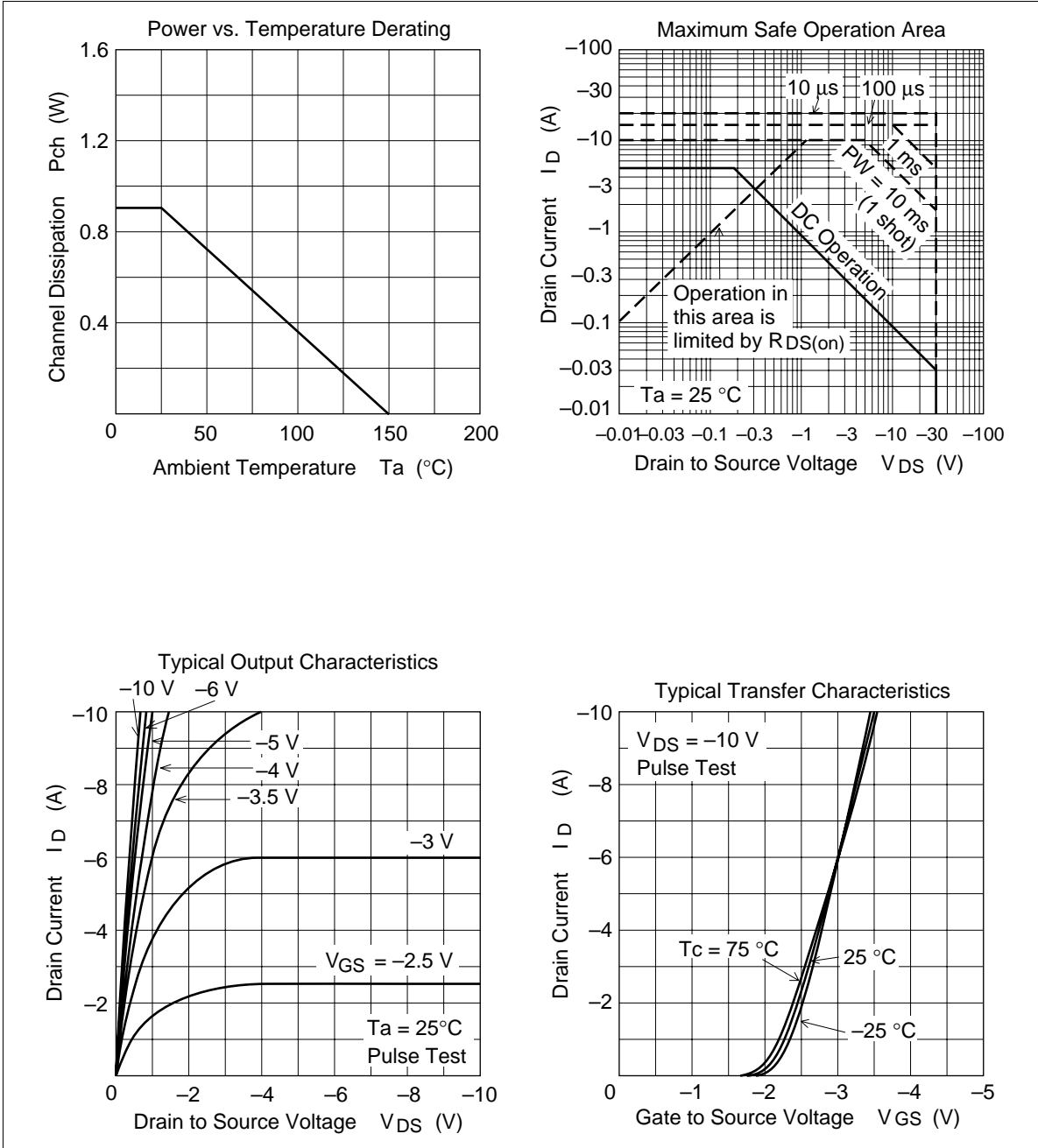
## Electrical Characteristics (Ta = 25°C)

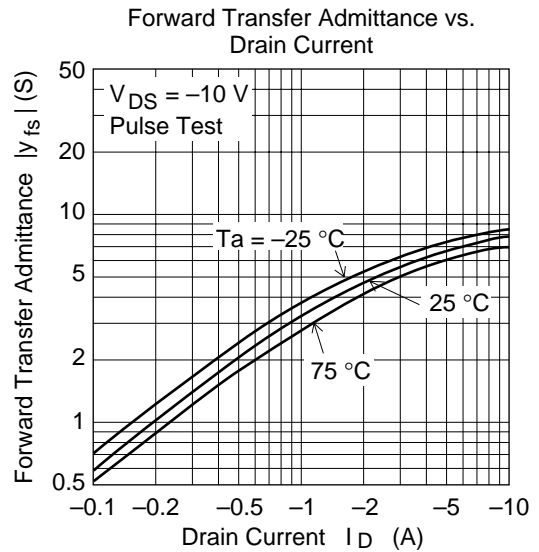
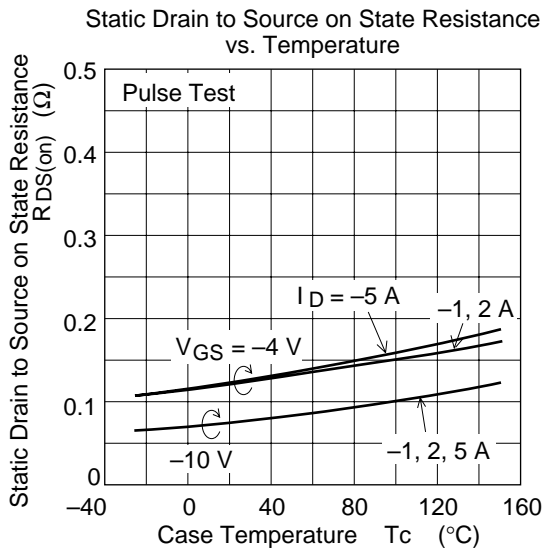
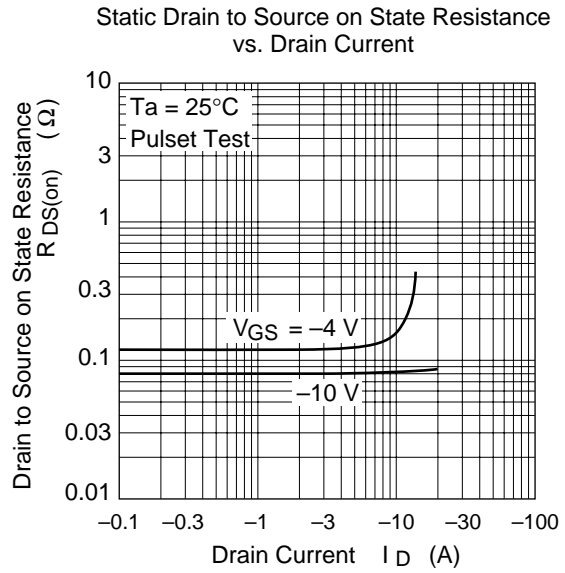
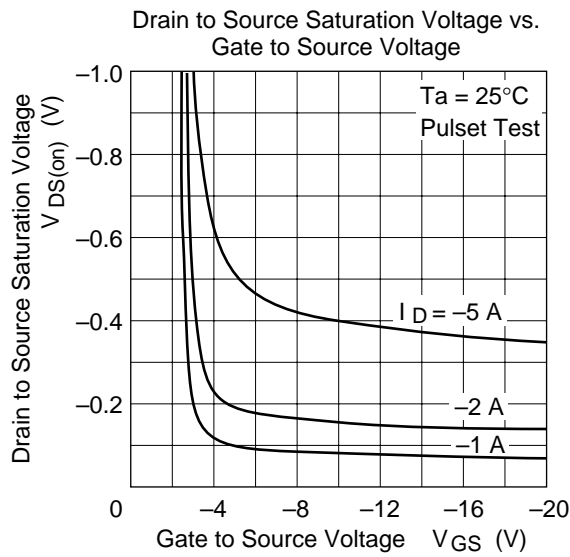
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	-30	—	—	V	$I_D = -10\text{mA}$ , $V_{GS} = 0$
Gate to source breakdown voltage	$V_{(BR)GSS}$	$\pm 20$	—	—	V	$I_G = \pm 100\mu\text{A}$ , $V_{DS} = 0$
Zero gate voltage drain current	$I_{DSS}$	—	—	-10	$\mu\text{A}$	$V_{DS} = -30\text{V}$ , $V_{GS} = 0$
Gate to source leak current	$I_{GSS}$	—	—	$\pm 10$	$\mu\text{A}$	$V_{GS} = \pm 16\text{V}$ , $V_{DS} = 0$
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	$R_{DS(on)}$	—	0.08	0.11	$\Omega$	$I_D = -2.5\text{A}$ $V_{GS} = -10\text{V}^{*1}$
	$R_{DS(on)}$	—	0.12	0.17	$\Omega$	$I_D = -2.5\text{A}$ $V_{GS} = -4\text{V}^{*1}$
Forward transfer admittance	$ y_{fs} $	3	5	—	S	$I_D = -2.5\text{A}$ , $V_{DS} = -10\text{V}^{*1}$
Input capacitance	$C_{iss}$	—	630	—	pF	$V_{DS} = -10\text{V}$
Output capacitance	$C_{oss}$	—	390	—	pF	$V_{GS} = 0$
Reverse transfer capacitance	$C_{rss}$	—	135	—	pF	$f = 1\text{MHz}$
Turn-on delay time	$t_{d(on)}$	—	15	—	ns	$V_{GS} = -10\text{V}$ , $I_D = -2.5\text{A}$
Rise time	$t_r$	—	70	—	ns	$R_L = 4\Omega$
Turn-off delay time	$t_{d(off)}$	—	65	—	ns	
Fall time	$t_f$	—	60	—	ns	
Body to drain diode forward voltage	$V_{DF}$	—	-1.0	—	V	$I_D = -5\text{A}$ , $V_{GS} = 0$
Body to drain diode reverse recovery time	$t_{rr}$	—	60	—	ns	$I_F = -5\text{A}$ , $V_{GS} = 0$ $diF/dt = 20\text{A}/\mu\text{s}$

Note: 1. Pulse test

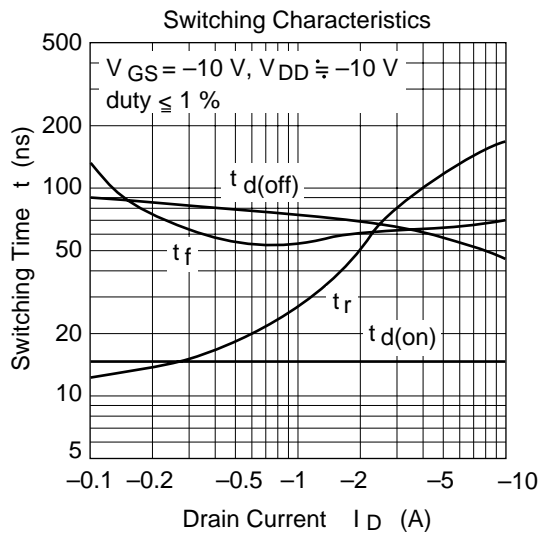
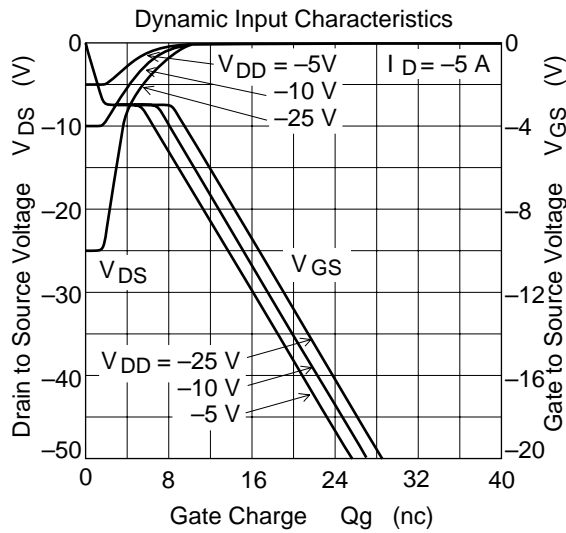
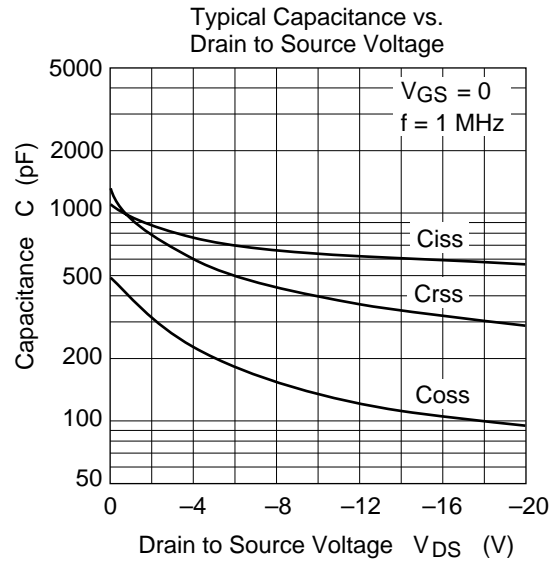
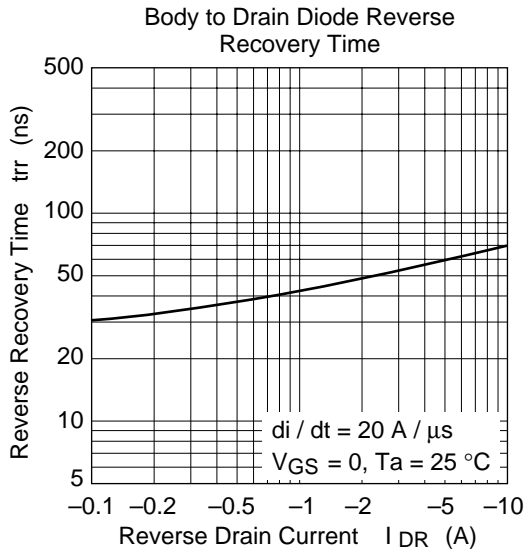
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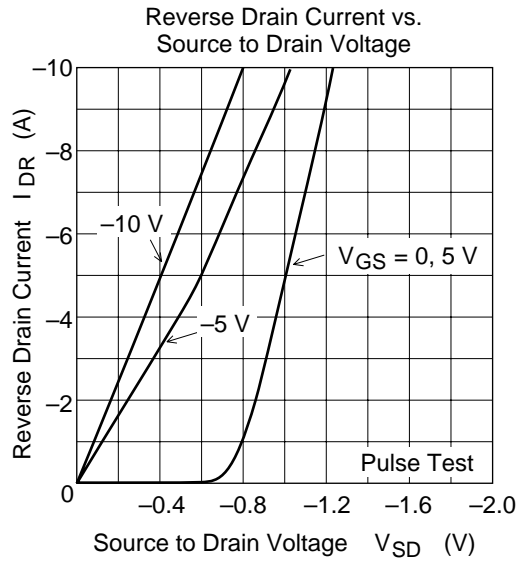
## Main Characteristics



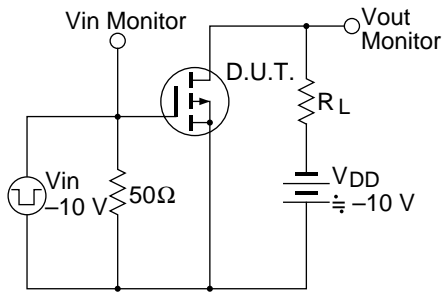


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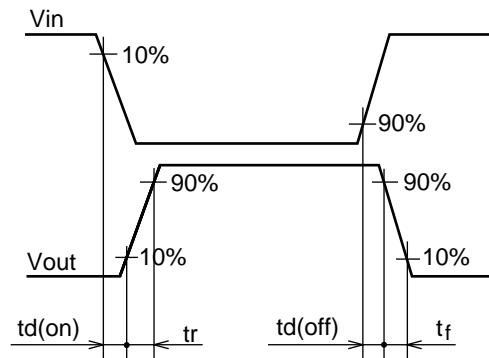




Switching Time Test Circuit



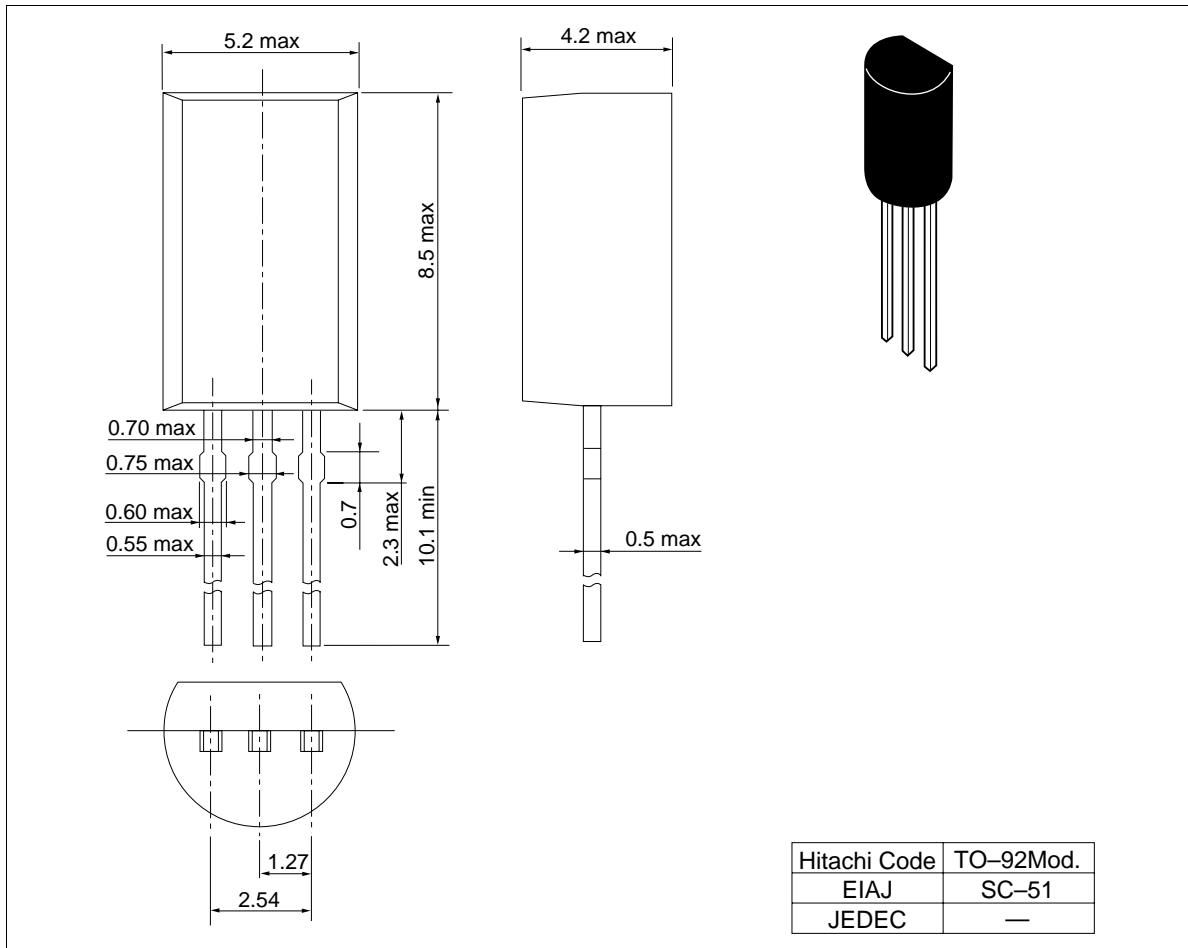
Switching Time Waveforms



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## Package Dimensions

Unit: mm





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