
2SJ483

Silicon P Channel MOS FET
High Speed Power Switching

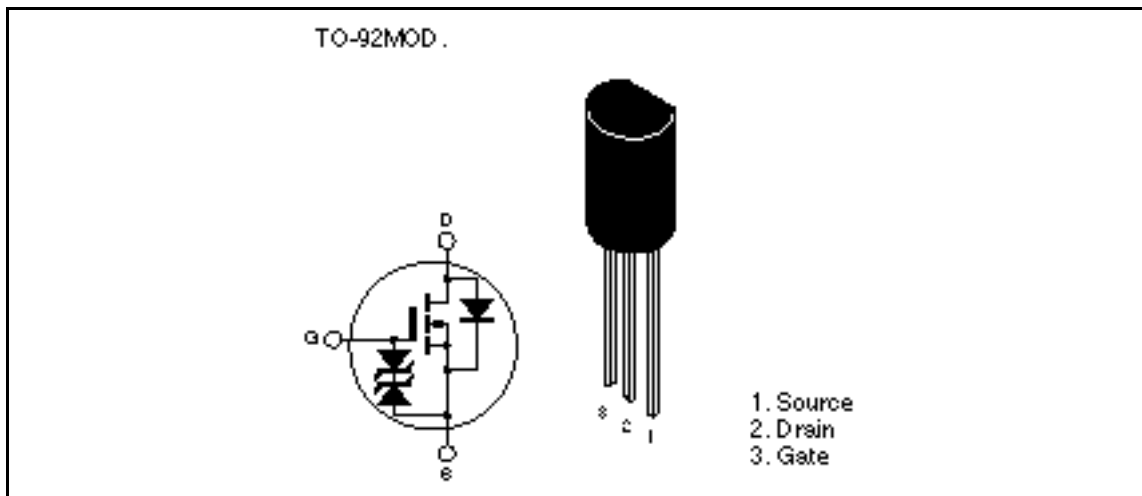
HITACHI

ADE-208-519
1st. Edition

Features

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

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	-5	A
Drain peak current	$I_{D(pulse)}$ ^{Note1}	-20	A
Body to drain diode reverse drain current	I_{DR}	-5	A
Channel dissipation	Pch	0.9	W
Channel temperature	Tch	150	°C
Storage temperature	Tstg	-55 to +150	°C

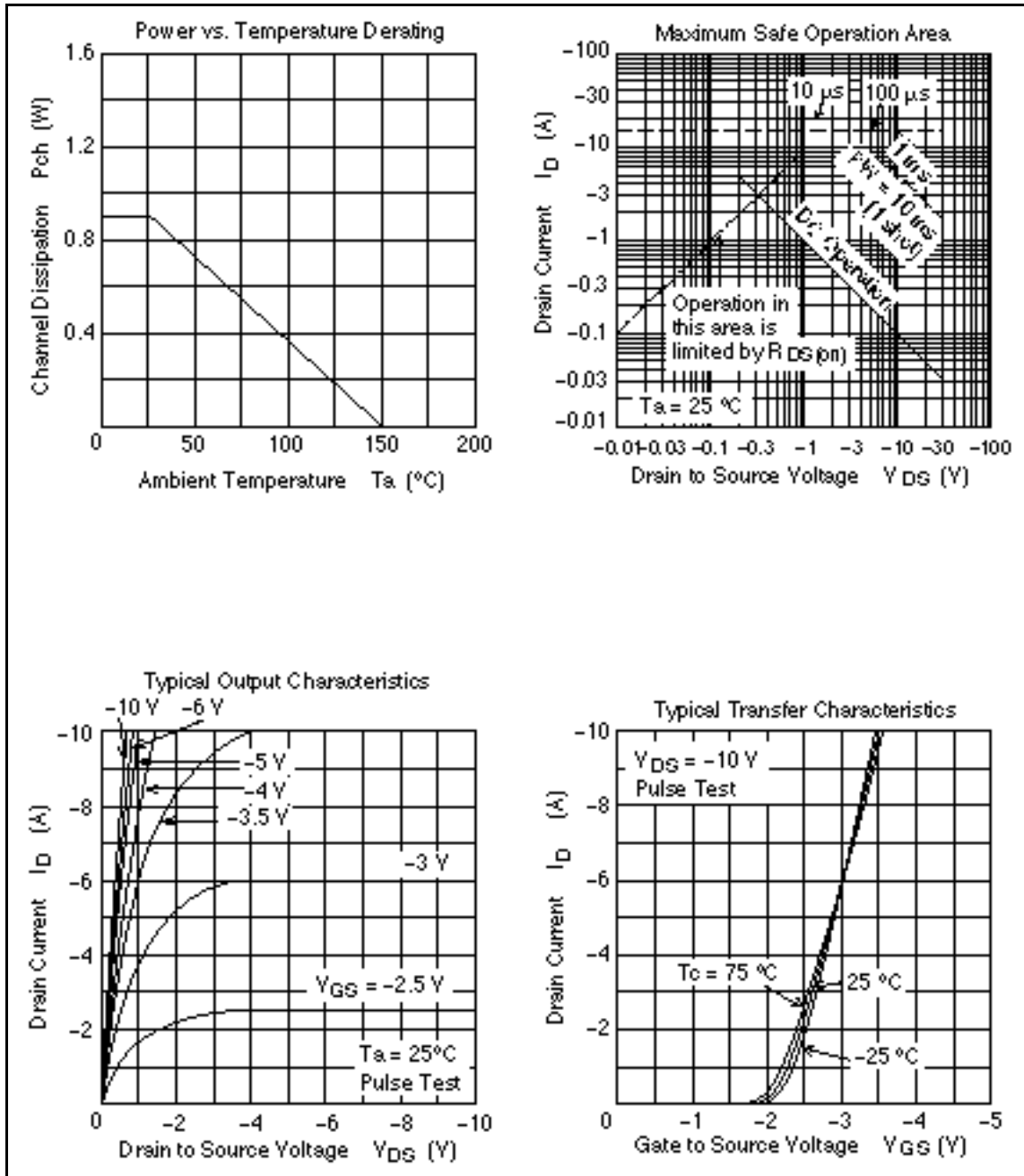
Note: 1. PW 10 μ s, duty cycle 1 %

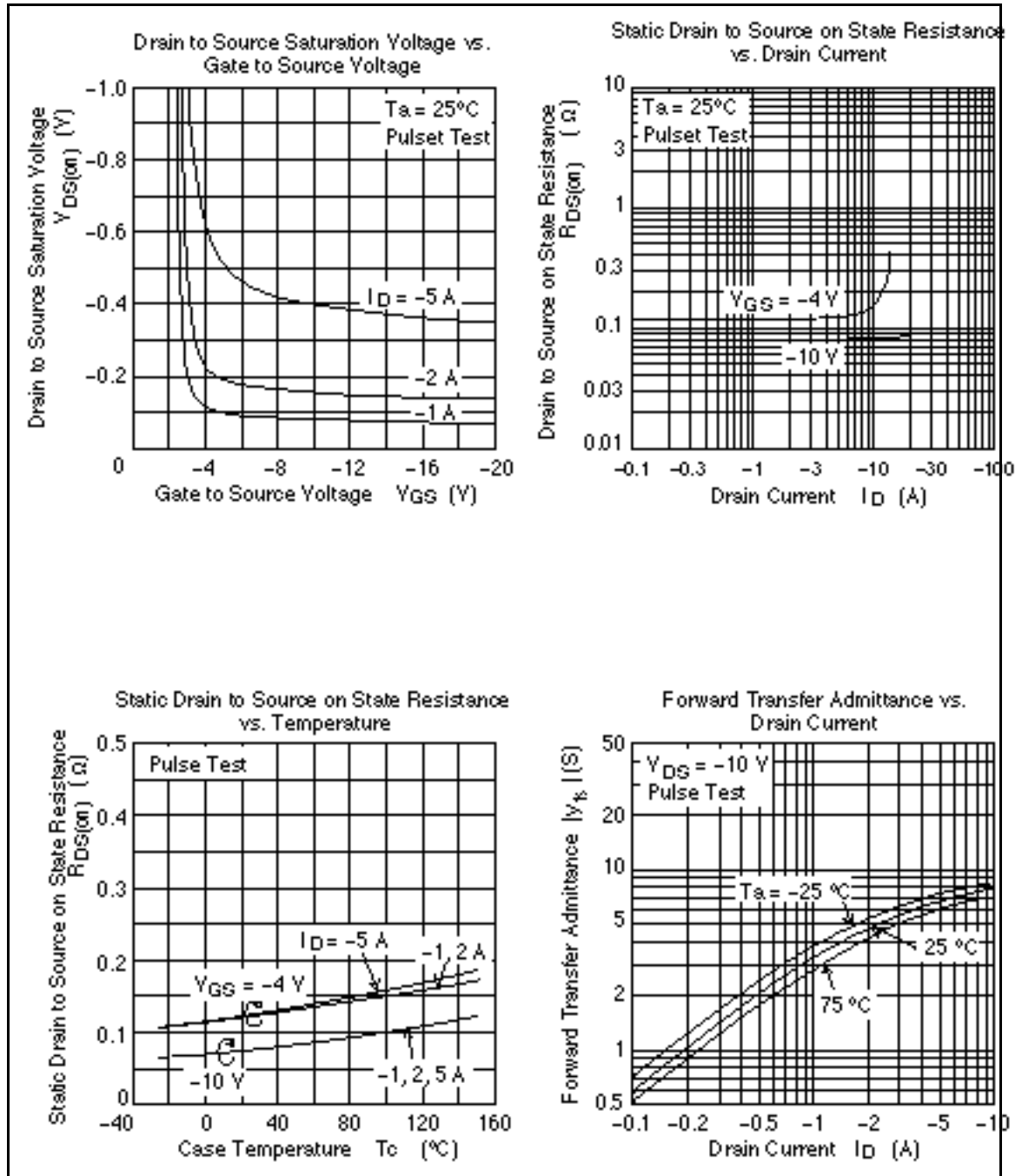
Electrical Characteristics (Ta = 25°C)

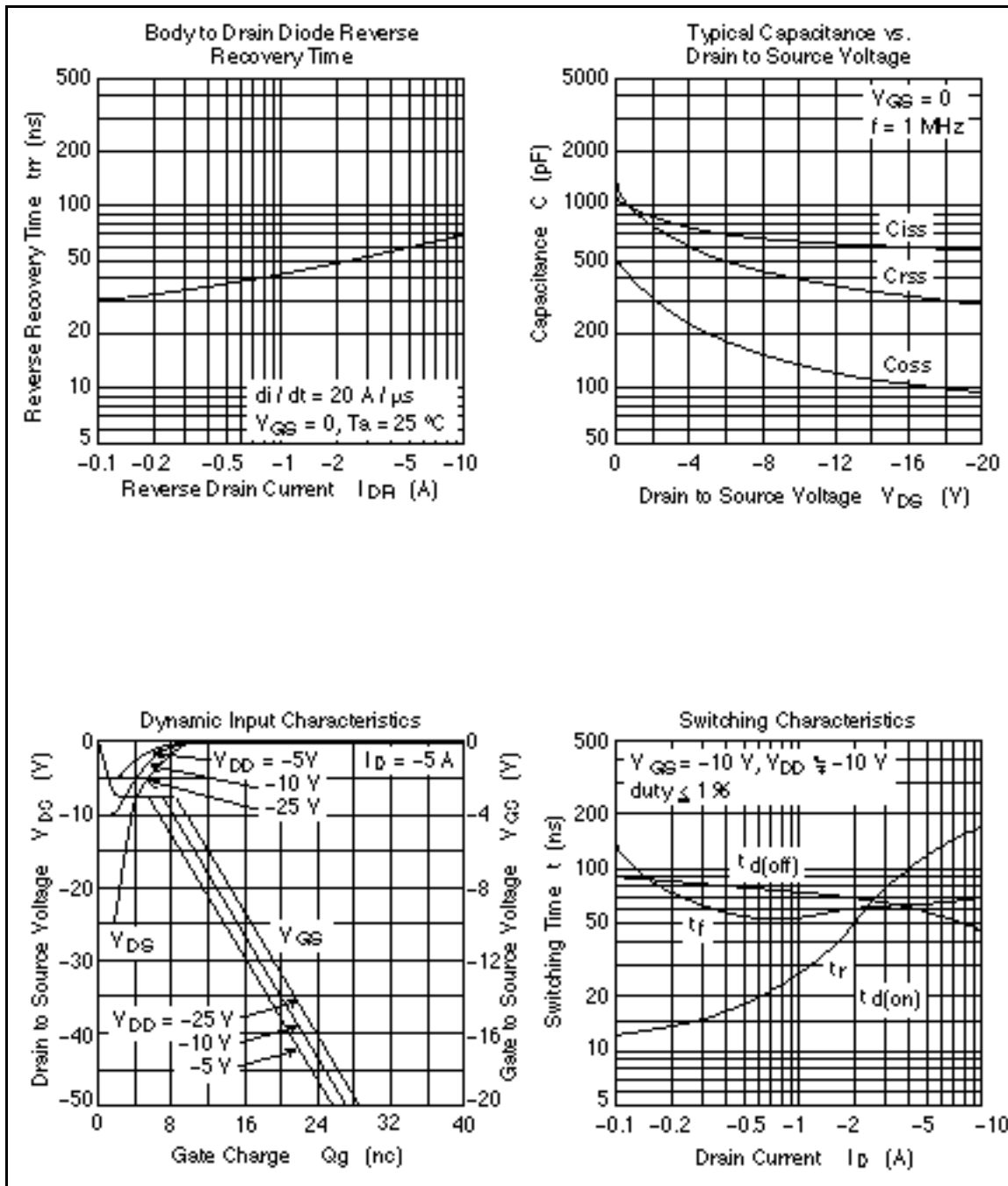
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	-30	—	—	V	$I_D = -10mA, V_{GS} = 0$
Gate to source breakdown voltage	$V_{(BR)GSS}$	± 20	—	—	V	$I_G = \pm 100\mu A, V_{DS} = 0$
Zero gate voltage drain current	I_{DSS}	—	—	-10	μA	$V_{DS} = -30V, V_{GS} = 0$
Gate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

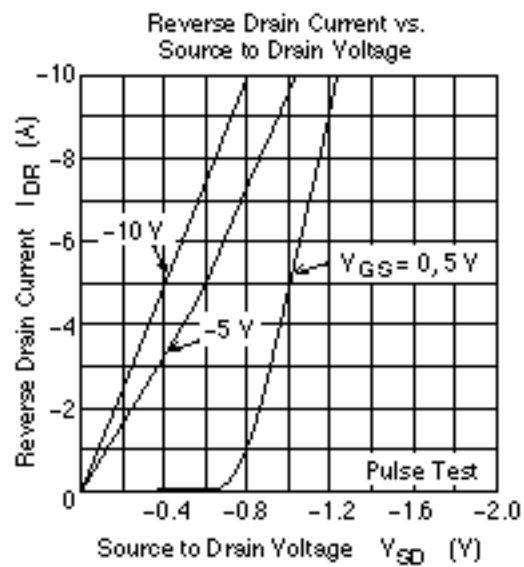
Note: 1. Pulse test

Main Characteristics

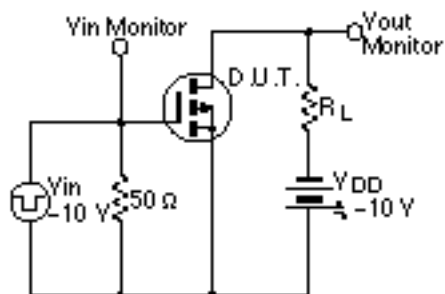




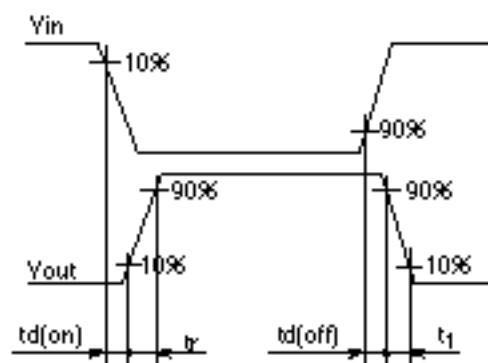




Switching Time Test Circuit

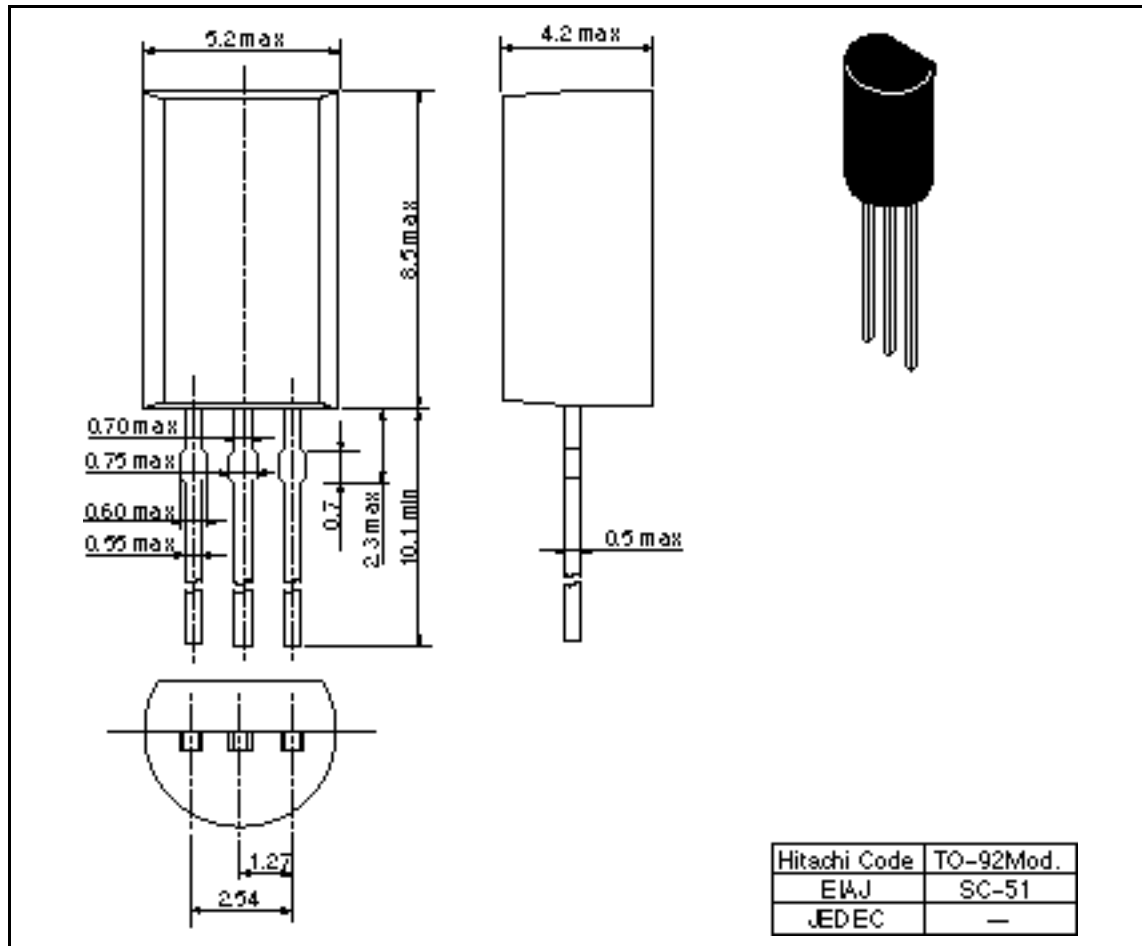


Switching Time Waveforms



Package Dimensions

Unit: mm



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