

2SJ575

Silicon P Channel MOS FET
High Speed Switching

HITACHI

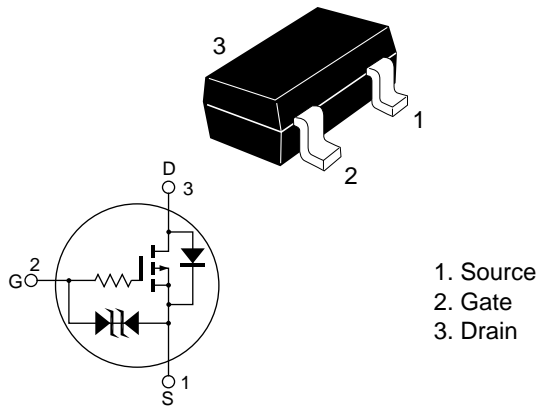
ADE-208-740B (Z)
3rd.Edition.
June 1999

Features

- Low on-resistance
 $R_{DS} = 2.8 \Omega$ typ. ($V_{GS} = -10 \text{ V}$, $I_D = -50 \text{ mA}$)
 $R_{DS} = 5.7 \Omega$ typ. ($V_{GS} = -4 \text{ V}$, $I_D = -50 \text{ mA}$)
- 4 V gate drive device.
- Small package (MPAK)

Outline

MPAK



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	-100	mA
Drain peak current	I _{D(pulse)} ^{Note1}	-400	mA
Body-drain diode reverse drain current	I _{DR}	-100	mA
Channel dissipation	P _{ch} ^{Note 2}	400	mW
Channel temperature	T _{ch}	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

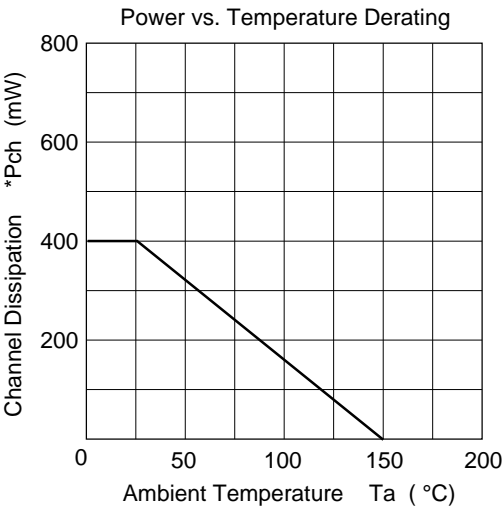
Note: 1. PW ≤ 10 μs, duty cycle ≤ 1%
2. Value on the alumina ceramic board (12.5x20x0.7mm)

Electrical Characteristics (Ta = 25°C)

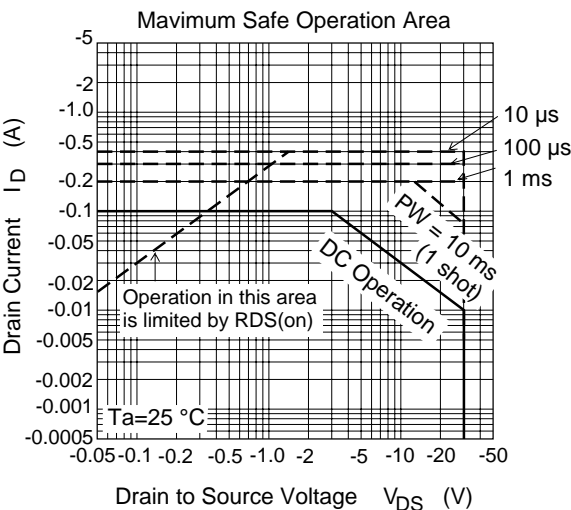
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	V _{(BR)DSS}	-30	—	—	V	I _D = -100 μA, V _{GS} = 0
Gate to source breakdown voltage	V _{(BR)GSS}	±20	—	—	V	I _G = ±100 μA, V _{DS} = 0
Gate to source leak current	I _{GSS}	—	—	±5	μA	V _{GS} = ±16 V, V _{DS} = 0
Zero gate voltage drain current	I _{DSS}	—	—	-1	μA	V _{DS} = -30 V, V _{GS} = 0
Gate to source cutoff voltage	V _{GS(off)}	-1.3	—	-2.3	V	I _D = -10μA, V _{DS} = -5 V
Static drain to source on state resistance	R _{DS(on)}	—	2.8	3.3	Ω	I _D = -50 mA, V _{GS} = -10 V ^{Note 3}
	R _{DS(on)}	—	5.7	7.9	Ω	I _D = -50 mA, V _{GS} = -4 V ^{Note 3}
Forward transfer admittance	y _{fs}	68	105	—	mS	I _D = -50 mA, V _{DS} = -10 V ^{Note 3}
Input capacitance	Ciss	—	25	—	pF	V _{DS} = -10 V
Output capacitance	Coss	—	20	—	pF	V _{GS} = 0
Reverse transfer capacitance	Crss	—	8	—	pF	f = 1 MHz
Turn-on delay time	t _{d(on)}	—	10	—	ns	I _D = -50mA, V _{GS} = -10 V
Rise time	t _r	—	15	—	ns	R _L = 200Ω
Turn-off delay time	t _{d(off)}	—	40	—	ns	
Fall time	t _f	—	45	—	ns	

Note: 3. Pulse test
4. Marking is AP

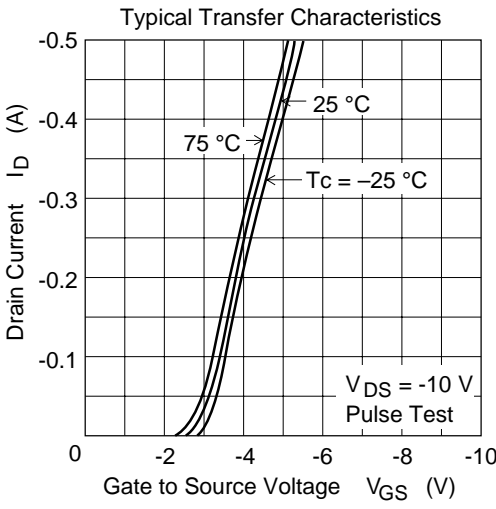
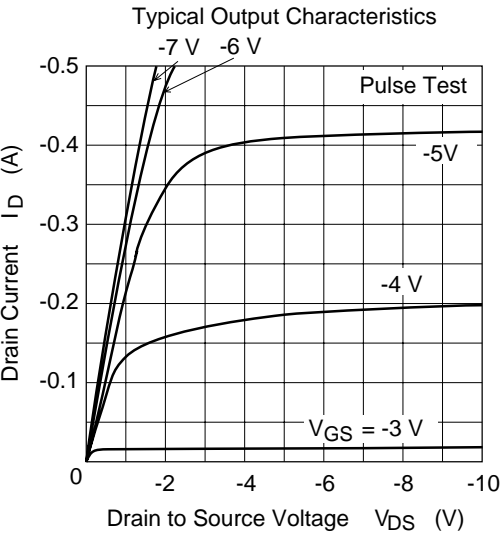
Main Characteristics

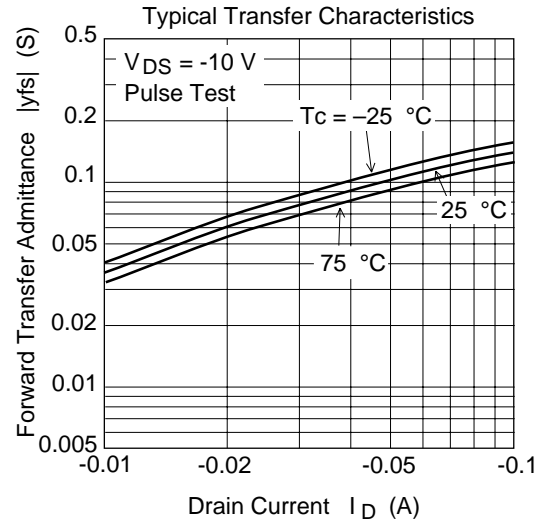
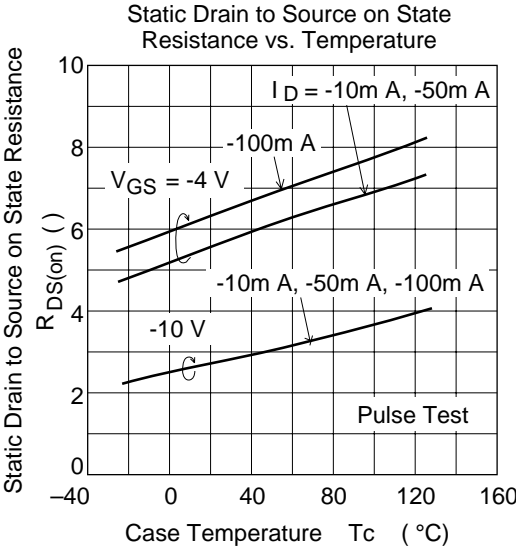
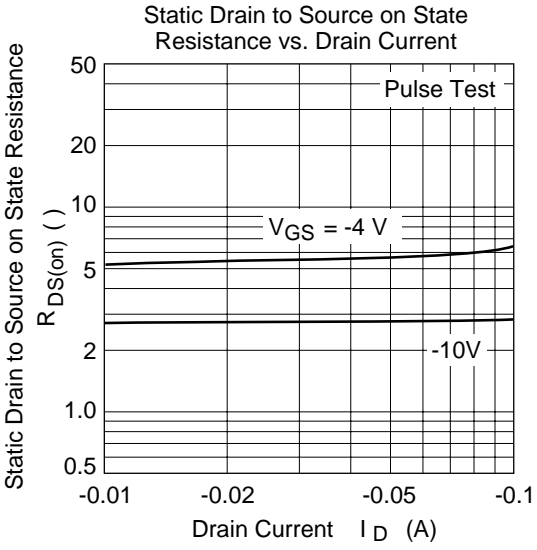
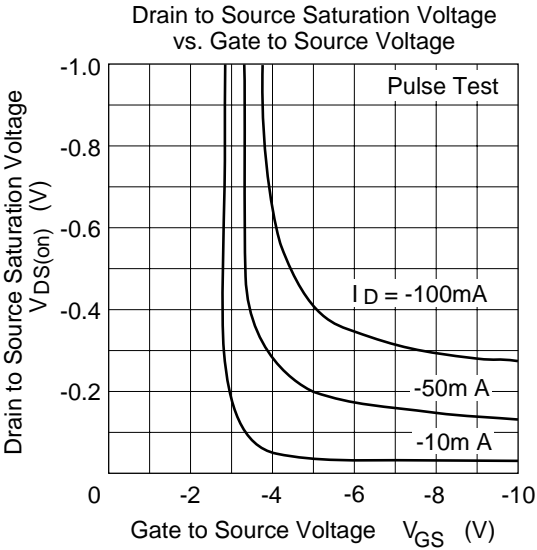


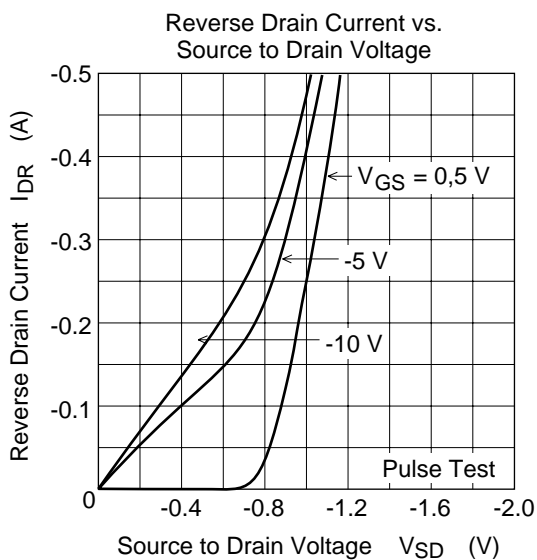
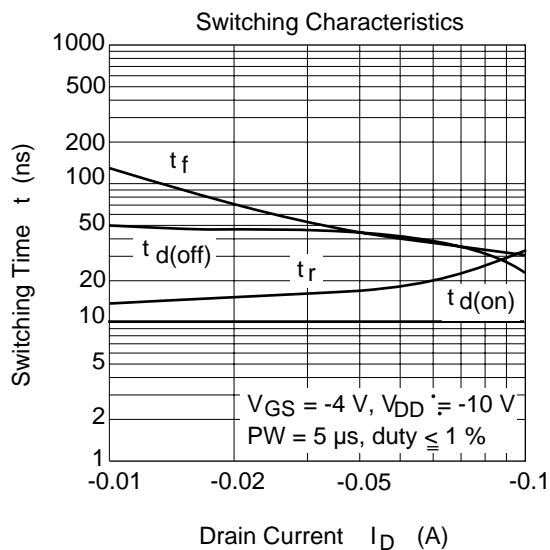
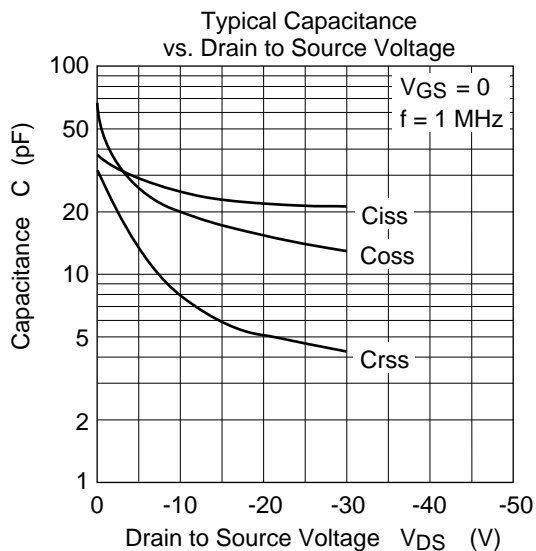
*Value on the alumina ceramic boad (12.5x20x0.7mm)



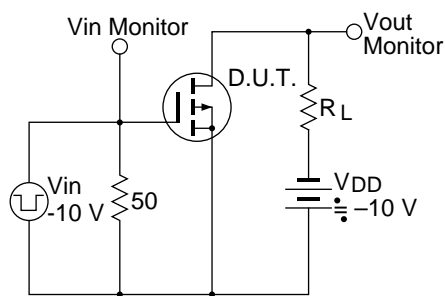
Value on the alumina ceramic boad (12.5x20x0.7mm)



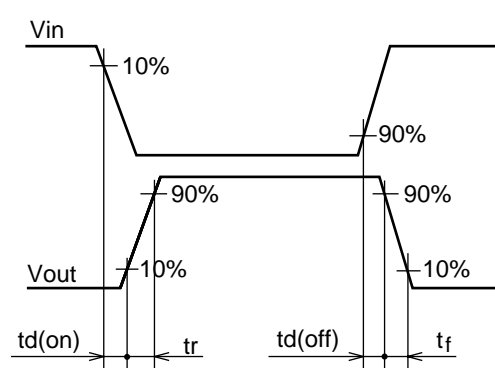




Switching Time Test Circuit

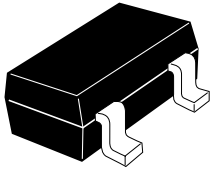
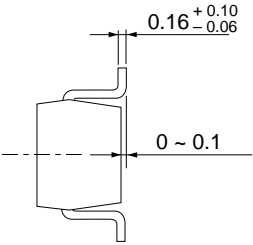
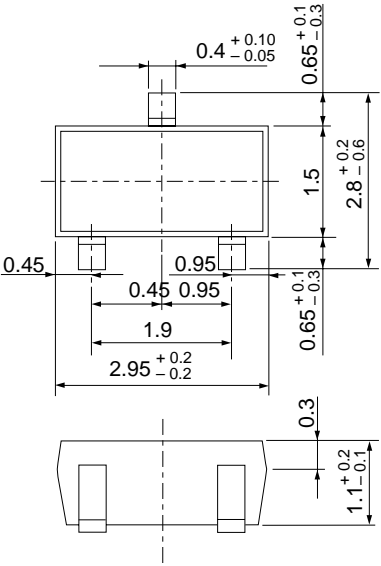


Waveforms



Package Dimensions

Unit: mm



Hitachi Code	MPAK
EIAJ	SC-59
JEDEC	TO-236Mod.

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