HITACHI

2SJ450

Silicon P Channel MOS FET

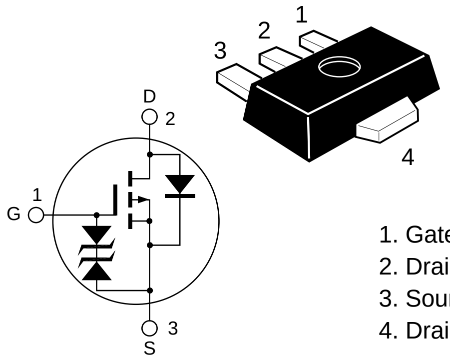
Application

High speed power switching

Features

- Low on-resistance.
- Low drive power
- High speed switching
- 2.5V gate drive device.

UPAK



1. Gate
2. Drain
3. Source
4. Drain

Table 1 Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V_{DSS}	–60	V
Gate to source voltage	V_{GSS}	±20	V
Drain current	I_D	–1	A
Drain peak current	$I_{D(pulse)}{}^*$	–2	A
Drain peak current	I_{DR}	–1	A
Channel dissipation	Pch**	1	W
Channel temperature	Tch	150	°C
Storage temperature	Tstg	–55 to +150	°C

* PW ≤ 100 µs, duty cycle ≤ 10 %

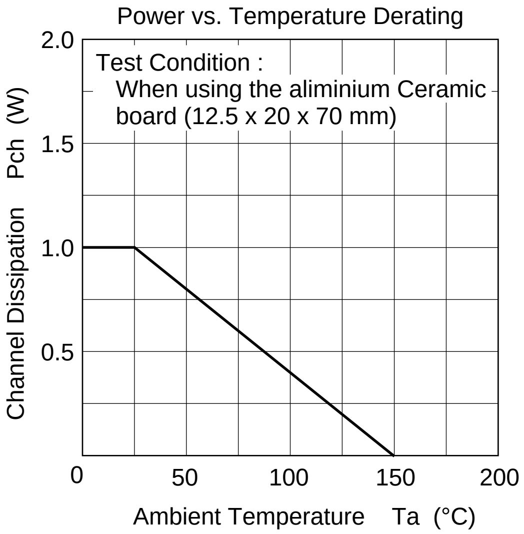
** When using aluminium ceramic board (12.5 x 20 x 70 mm)

Table 2 Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	–60	—	—	V	I_D = –10 mA, V_{GS} = 0
Gate to source breakdown voltage	$V_{(BR)GSS}$	±20	—	—	V	I_G = ±100 µA, V_{DS} = 0
Zero gate voltage drain current	I_{DSS}	—	—	–50	µA	V_{DS} = –50 V, V_{GS} = 0
Gate to source leak current	I_{GSS}	—	—	±10	µA	V_{GS} = ±16 V, V_{DS} = 0
Gate to source cutoff voltage	$V_{GS(off)}$	–0.5	—	–1.5	V	V_{DS} = –10 V, I_D = –1 mA
Static drain to source on state resistance	$R_{DS(on)}$	—	0.85	1.2	Ω	I_D = –0.5 A V_{GS} = –4 V *
Static drain to source on state resistance	$R_{DS(on)}$	—	1.1	1.9	Ω	I_D = –0.3 A V_{GS} = –2.5 V *
Fowerd transfer admittance	$\|y_{fs}\|$	0.6	1.0	—	S	I_D = –0.5 A V_{DS} = –10 V
Input capacitance	Ciss	—	150	—	pF	V_{DS} = –10 V V_{GS} = 0 f = 1 MHz
Output capacitance	Coss	—	72	—	pF	
Reverse transfer capacitance	Crss	—	24	—	pF	
Turn–on delay time	$t_{d(on)}$	—	6	—	µs	V_{GS} = –10 V, I_D = –0.5 A R_L = 60 Ω
Rise time	t_r	—	9	—	µs	
Turn–off delay time	$t_{d(off)}$	—	50	—	µs	
Fall time	t_f	—	35	—	µs	
Body–drain diode forward voltage	V_{DF}	—	–0.9	—	V	I_F = –1 A, V_{GS} = 0
Body–drain diode reverse recovery time	trr	—	100	—	ns	I_F = –1 A, V_{GS} = 0 diF / dt = 50A / µs

* Pulse Test

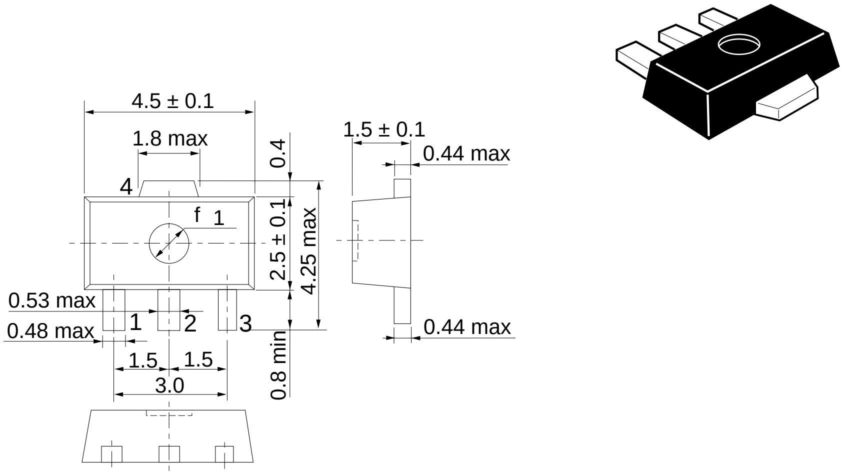
Marking is "UY".



Package Dimensions

Unit : mm

- UPAK



Hitachi Code	UPAK
EIAJ	SC–62
JEDEC	UPAK