

2SK1772

Silicon N Channel MOS FET

REJ03G0971-0200

(Previous: ADE-208-1318)

Rev.2.00

Sep 07, 2005

Application

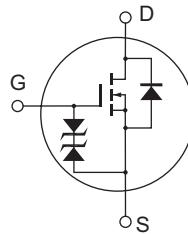
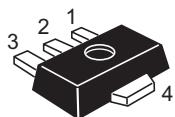
High speed power switching

Features

- Low on-resistance
- High speed switching
- Low drive current
- 4 V gate drive device can be driven from 5 V source.
- Suitable for DC-DC converter, motor drive, power switch, solenoid drive

Outline

RENESAS Package code: PLZZ0004CA-A
(Package name: UPAK®)



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

Note: Marking is "HY".

*UPAK is a trademark of Renesas Technology Corp.

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	1	A
Drain peak current	I _{D(pulse)} ^{*1}	2	A
Body to drain diode reverse drain current	I _{DR}	1	A
Channel dissipation	P _{ch} ^{*2}	1	W
Channel temperature	T _{ch}	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

Notes: 1. PW ≤ 10 µs, duty cycle ≤ 1 %

2. When using the alumina ceramic board (12.5 × 20 × 0.7mm)

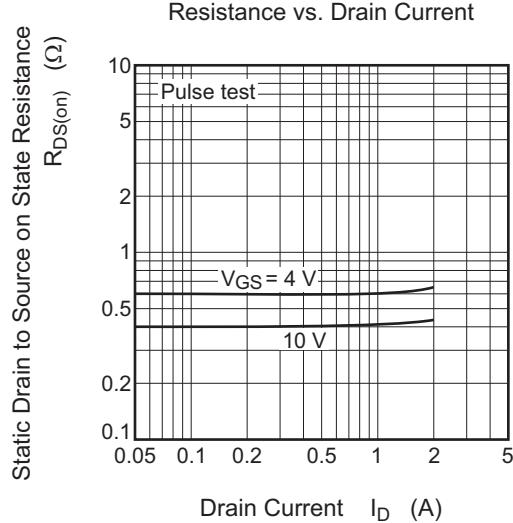
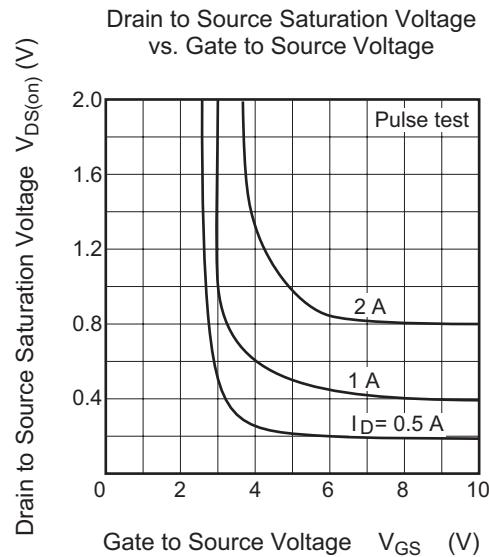
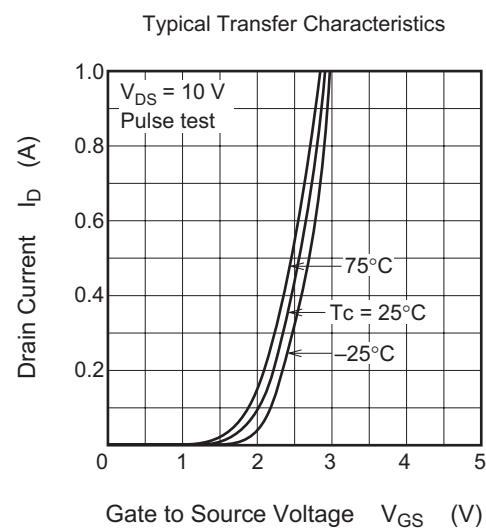
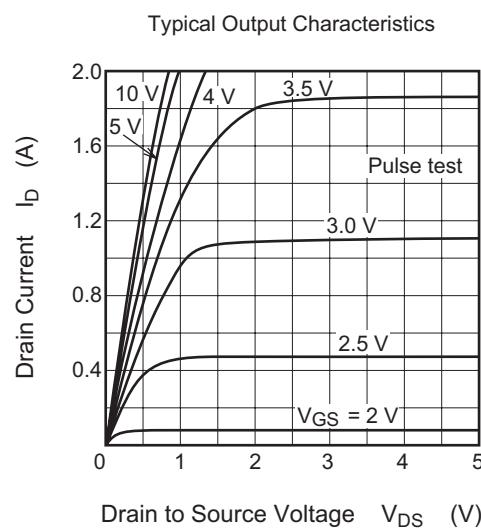
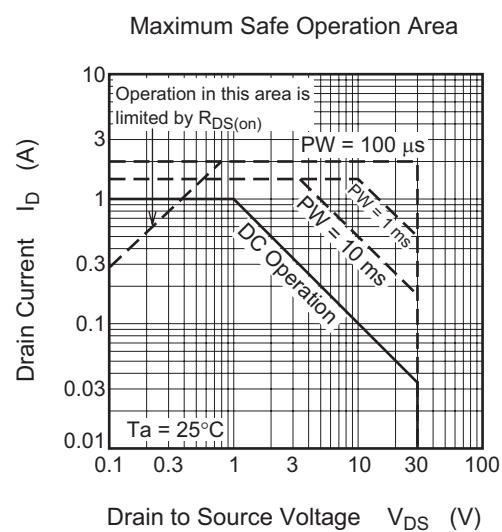
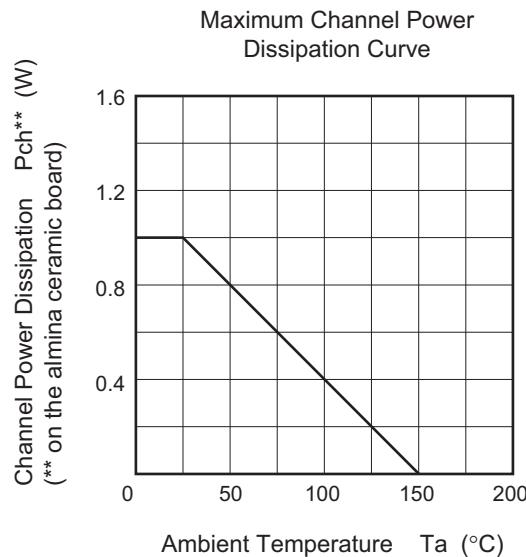
Electrical Characteristics

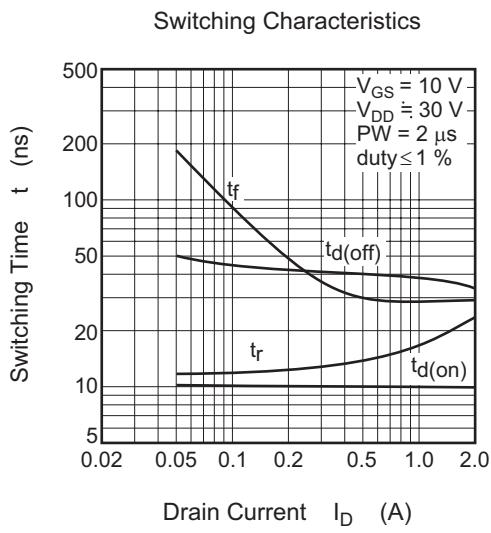
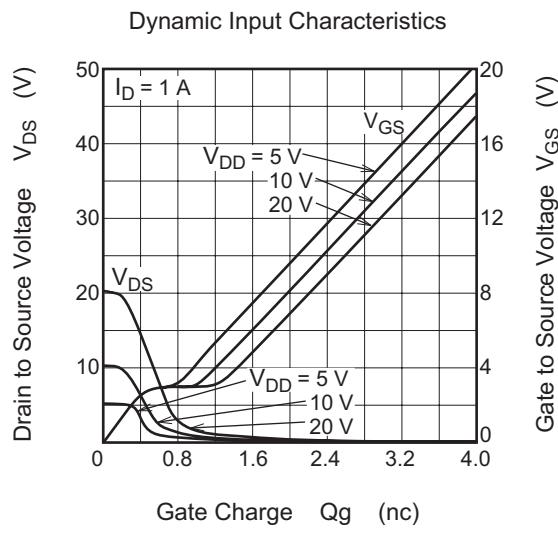
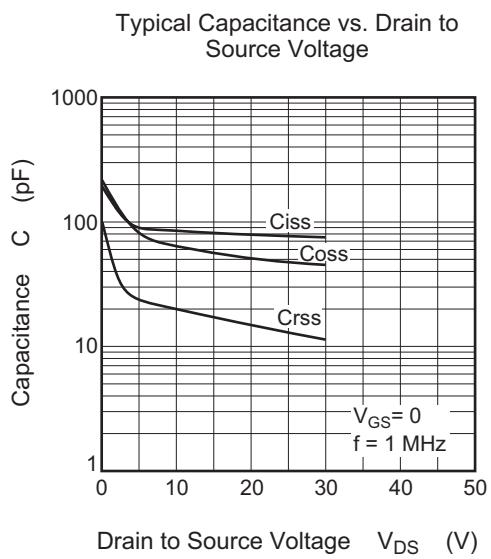
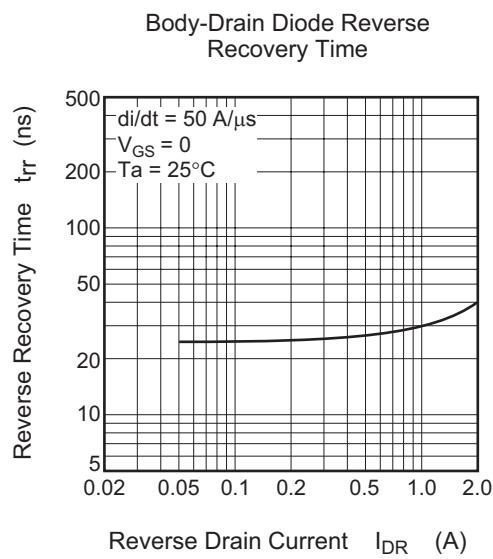
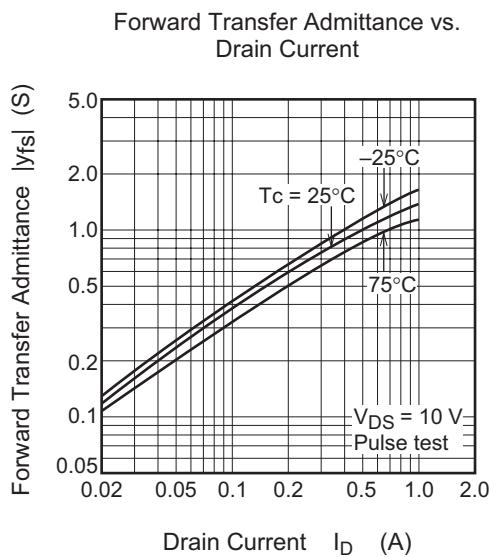
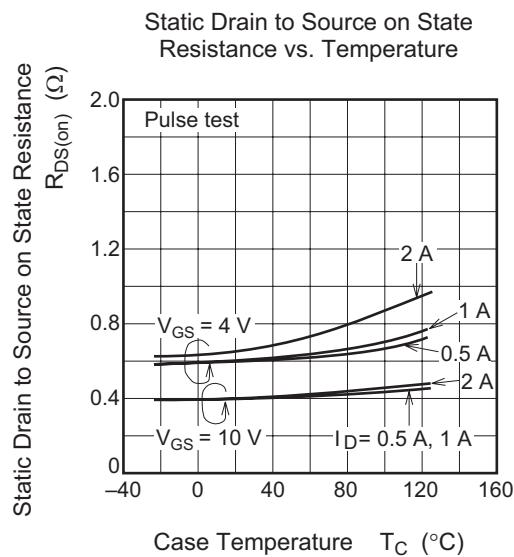
(Ta = 25°C)

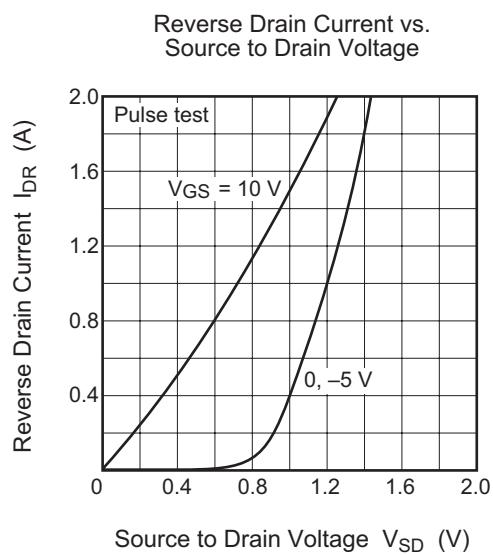
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	V _{(BR)DSS}	30	—	—	V	I _D = 10 mA, V _{GS} = 0
Gate to source breakdown voltage	V _{(BR)GSS}	±20	—	—	V	I _G = ±100 µA, V _{DS} = 0
Gate to source leak current	I _{GSS}	—	—	±10	µA	V _{GS} = ±16 V, V _{DS} = 0
Zero gate voltage drain current	I _{DSS}	—	—	50	µA	V _{DS} = 25 V, V _{GS} = 0
Gate to source cutoff voltage	V _{GS(off)}	1.0	—	2.0	V	I _D = 1 mA, V _{DS} = 10 V
Static drain to source on state resistance	R _{DS(on)}	—	0.4	0.6	Ω	I _D = 0.5 A, V _{GS} = 10 V ^{*3}
		—	0.6	0.85	Ω	I _D = 0.5 A, V _{GS} = 4 V ^{*3}
Forward transfer admittance	y _{fs}	0.6	1.0	—	S	I _D = 0.5 A, V _{DS} = 10 V ^{*3}
Input capacitance	C _{iss}	—	85	—	pF	V _{DS} = 10 V, V _{GS} = 0, f = 1 MHz
Output capacitance	C _{oss}	—	65	—	pF	
Reverse transfer capacitance	C _{rss}	—	20	—	pF	
Turn-on delay time	t _{d(on)}	—	10	—	ns	I _D = 0.5 A, V _{GS} = 10 V, R _L = 60 Ω ^{*3}
Rise time	t _r	—	15	—	ns	
Turn-off delay time	t _{d(off)}	—	40	—	ns	
Fall time	t _f	—	30	—	ns	
Body to drain diode forward voltage	V _{DF}	—	1.2	—	V	I _F = 1 A, V _{GS} = 0 ^{*3}
Body to drain diode reverse recovery time	t _{rr}	—	30	—	ns	I _F = 1 A, V _{GS} = 0, di _F /dt = 50 A/µs ^{*3}

Note: 3. Pulse Test

Main Characteristics

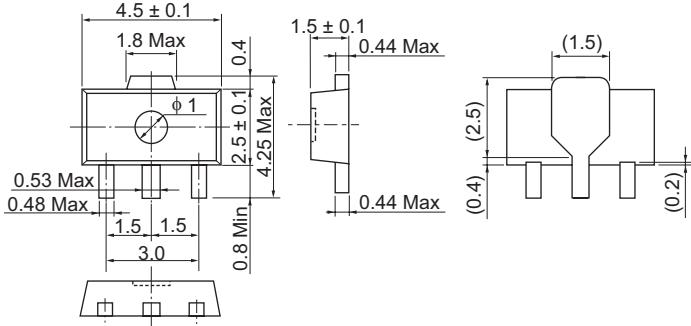






Package Dimensions

JEITA Package Code	RENESAS Code	Package Name	MASS[Typ.]	Unit: mm
SC-62	PLZZ0004CA-A	UPAK / UPAKV	0.050g	



Ordering Information

Part Name	Quantity	Shipping Container
2SK1772HYTR-E	3000 pcs	Taping, φ178 mm Reel

Note: For some grades, production may be terminated. Please contact the Renesas sales office to check the state of production before ordering the product.

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