

2SK1579

Silicon N Channel MOS FET

REJ03G0956-0200
(Previous: ADE-208-1296)
Rev.2.00
Sep 07, 2005

Application

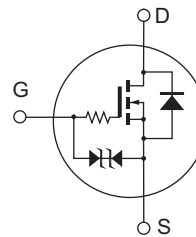
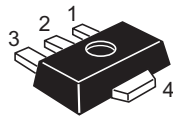
High speed power switching

Features

- Low on-resistance
- High speed switching
- Suitable for low voltage operation

Outline

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



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

Note: Marking is "DY".

*UPAK is a trademark of Renesas Technology Corp.

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V _{DSS}	12	V
Gate to source voltage	V _{GSS}	±7	V
Drain current	I _D	2	A
Drain peak current	I _{D(pulse)} ^{*1}	4	A
Body to drain diode reverse drain current	I _{DR}	2	A
Channel power dissipation	P _{ch} ^{*2}	1	W
Channel temperature	T _{ch}	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

Notes: 1. PW ≤ 100 μs, duty cycle ≤ 10%
 2. Value on the alumina ceramic board (12.5 × 20 × 0.7 mm)

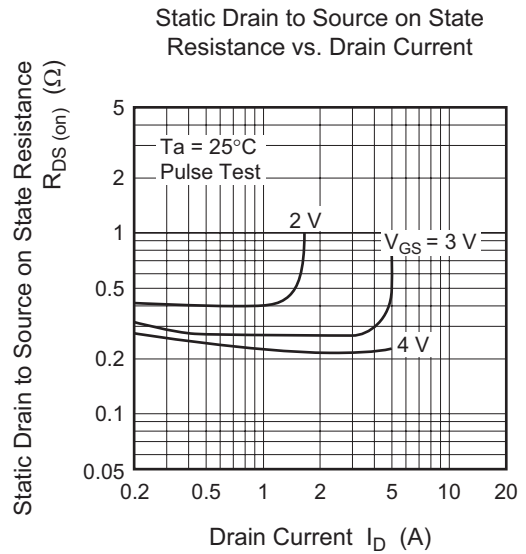
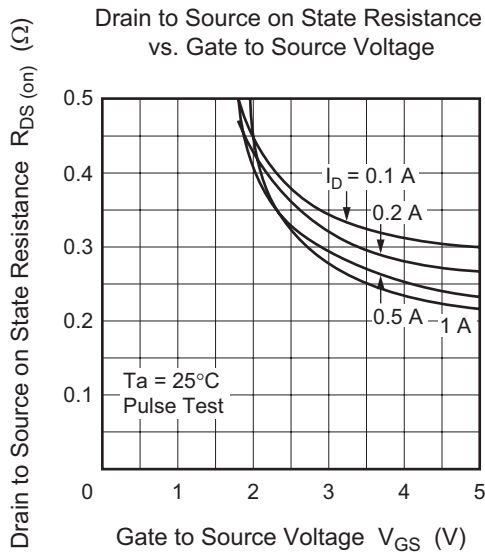
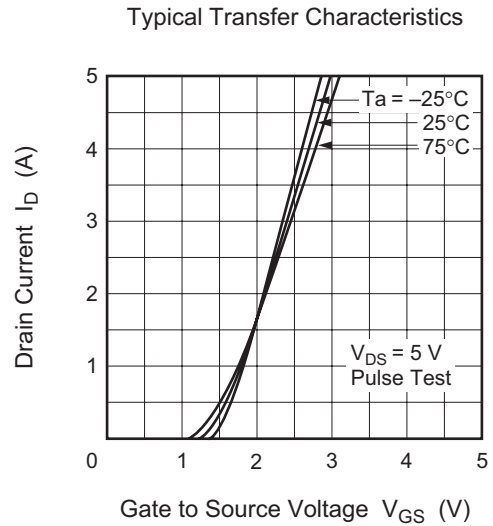
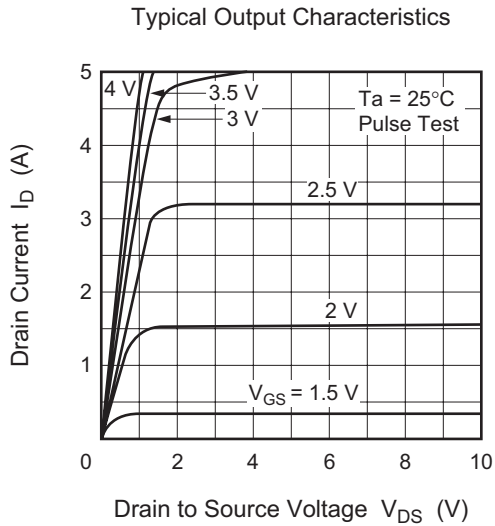
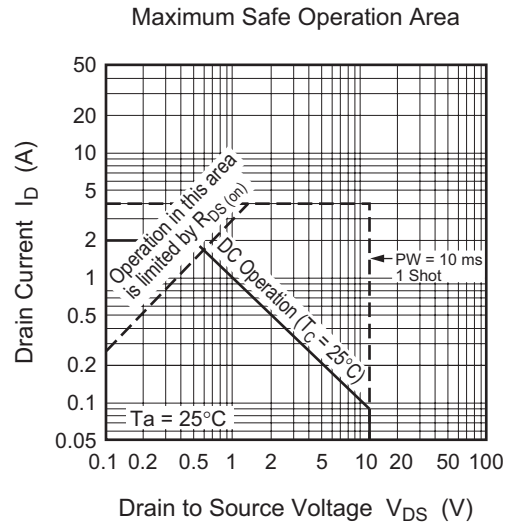
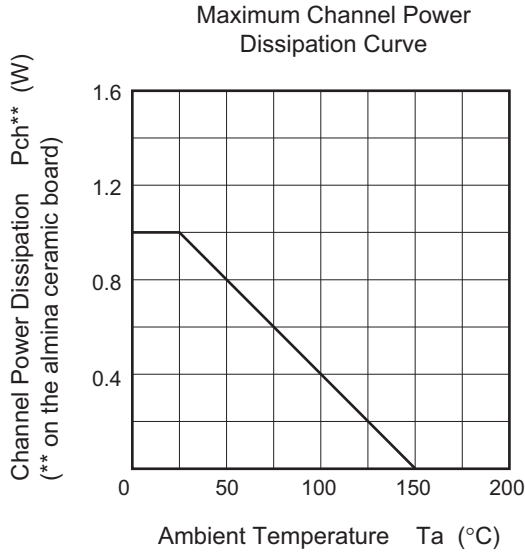
Electrical Characteristics

(Ta = 25°C)

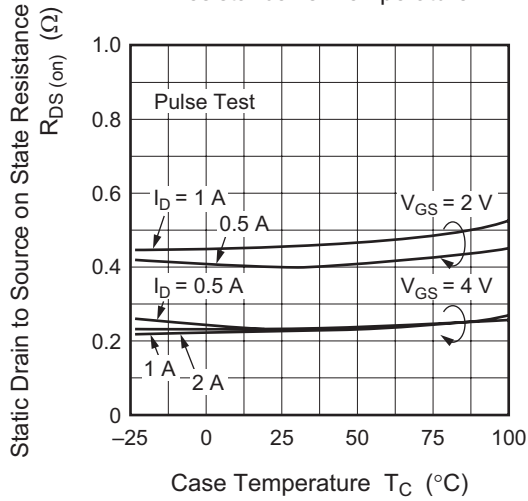
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Drain to source cutoff current	I _{DSS}	—	—	1	μA	V _{DS} = 8 V, V _{GS} = 0
Gate to source cutoff current	I _{GSS}	—	—	±5	μA	V _{GS} = ±6.5 V, V _{DS} = 0
Gate to source cutoff voltage	V _{GS(off)}	0.4	—	1.4	V	V _{DS} = 5 V, I _D = 100 μA
Drain to source on resistance (1)	R _{DS(on)1}	—	0.36	0.7	Ω	V _{GS} = 2.2 V, I _D = 0.5 A ^{*3}
Drain to source on resistance (2)	R _{DS(on)2}	—	0.25	0.35	Ω	V _{GS} = 4 V, I _D = 1 A ^{*3}
DC forward transfer admittance	y _{fs}	1	2.5	—	S	V _{DS} = 5 V, I _D = 1 A, ΔV _{GS} = 0.1 V ^{*3}
Input capacitance	C _{iss}	—	110	—	pF	V _{DS} = 5 V, V _{GS} = 0, f = 1 MHz
Reverse transfer capacitance	C _{rss}	—	30	—	pF	
Output capacitance	C _{oss}	—	150	—	pF	
Turn-on time	t _(on)	—	500	—	ns	I _D = 0.2 A, V _{GS} = 0, V _{in} = 4 V, R _L = 51 Ω ^{*3}
Turn-off time	t _(off)	—	1500	—	ns	

Note: 3. Pulse Test

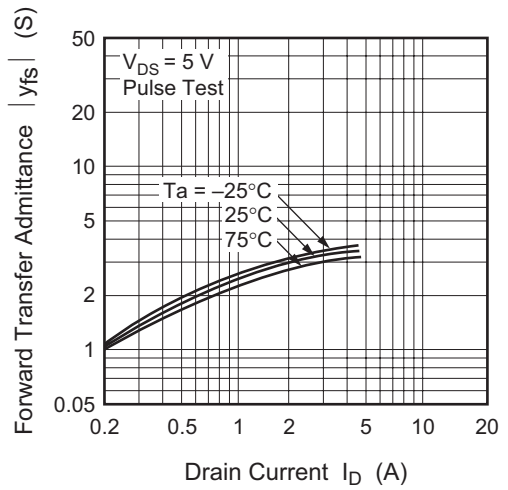
Main Characteristics



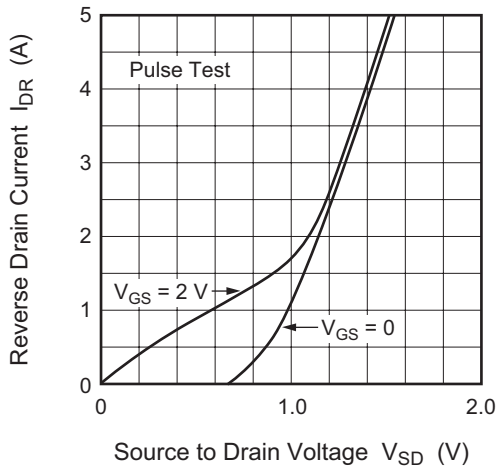
Static Drain to Source on State Resistance vs. Temperature



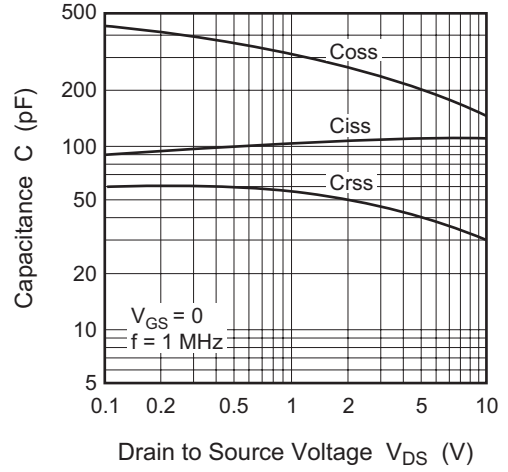
Forward Transfer Admittance vs. Drain Current



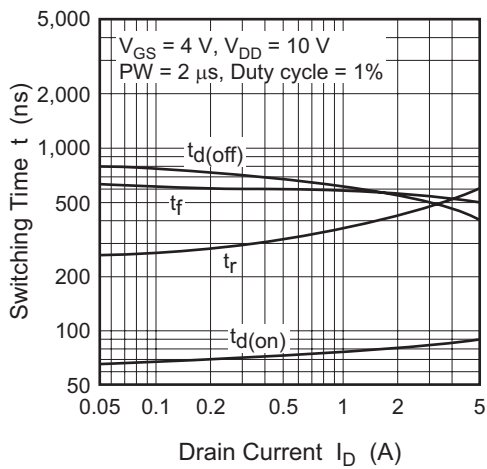
Reverse Drain Current vs. Source to Drain Voltage



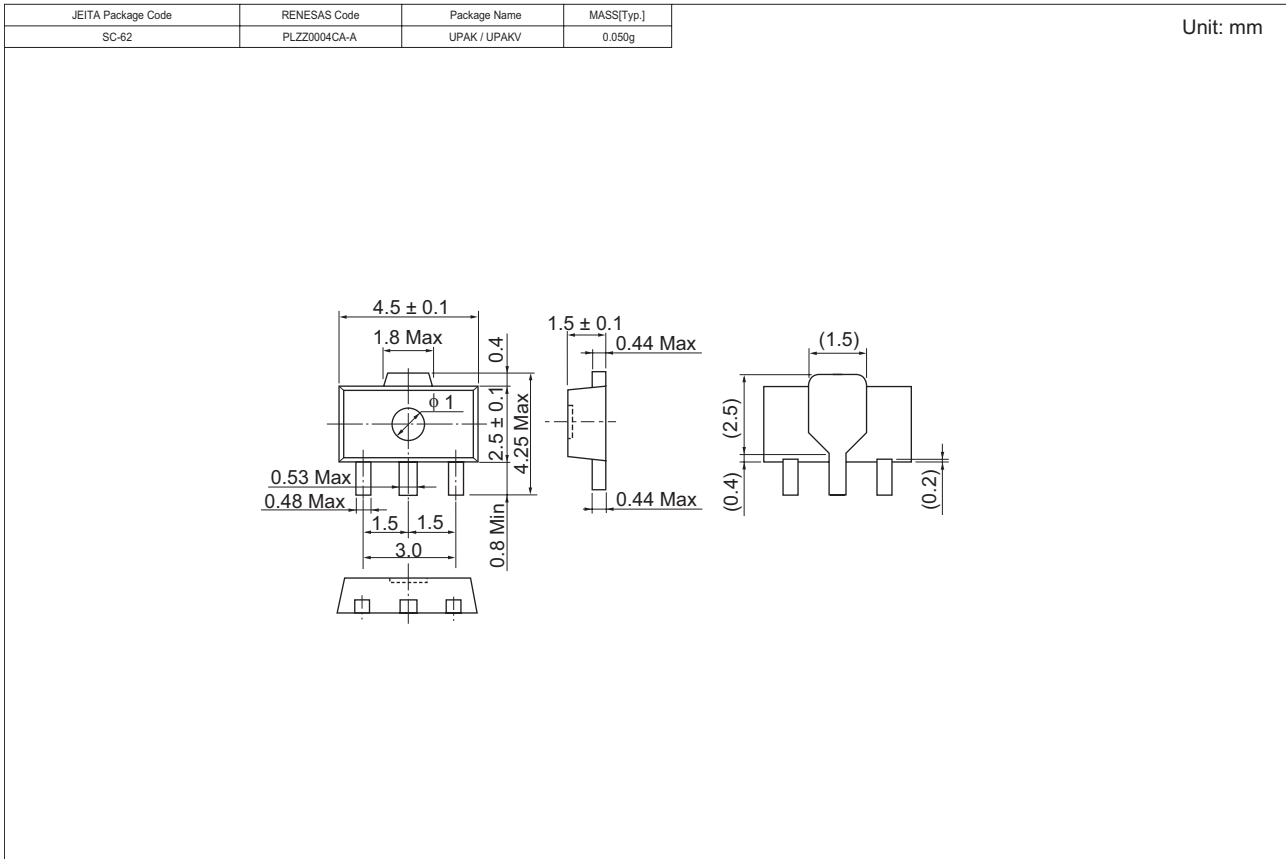
Typical Capacitance vs. Drain to Source Voltage



Switching Characteristics



Package Dimensions



Ordering Information

Part Name	Quantity	Shipping Container
2SK1579DY	3000 pcs	Taping, $\phi 178$ 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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