

2SK1056, 2SK1057, 2SK1058

Silicon N Channel MOS FET

REJ03G0906-0200
(Previous: ADE-208-1244)
Rev.2.00
Sep 07, 2005

Application

Low frequency power amplifier

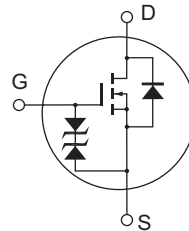
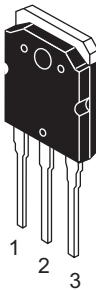
Complementary pair with 2SJ160, 2SJ161 and 2SJ162

Features

- Good frequency characteristic
- High speed switching
- Wide area of safe operation
- Enhancement-mode
- Good complementary characteristics
- Equipped with gate protection diodes
- Suitable for audio power amplifier

Outline

RENESAS Package code: PRSS0004ZE-A
(Package name: TO-3P)



1. Gate
2. Source (Flange)
3. Drain

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V_{DSX}	120	V
		140	
		160	
Gate to source voltage	V_{GSS}	±15	V
Drain current	I_D	7	A
Body to drain diode reverse drain current	I_{DR}	7	A
Channel dissipation	P_{ch}^{*1}	100	W
Channel temperature	T_{ch}	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

Note: 1. Value at $T_C = 25^\circ\text{C}$

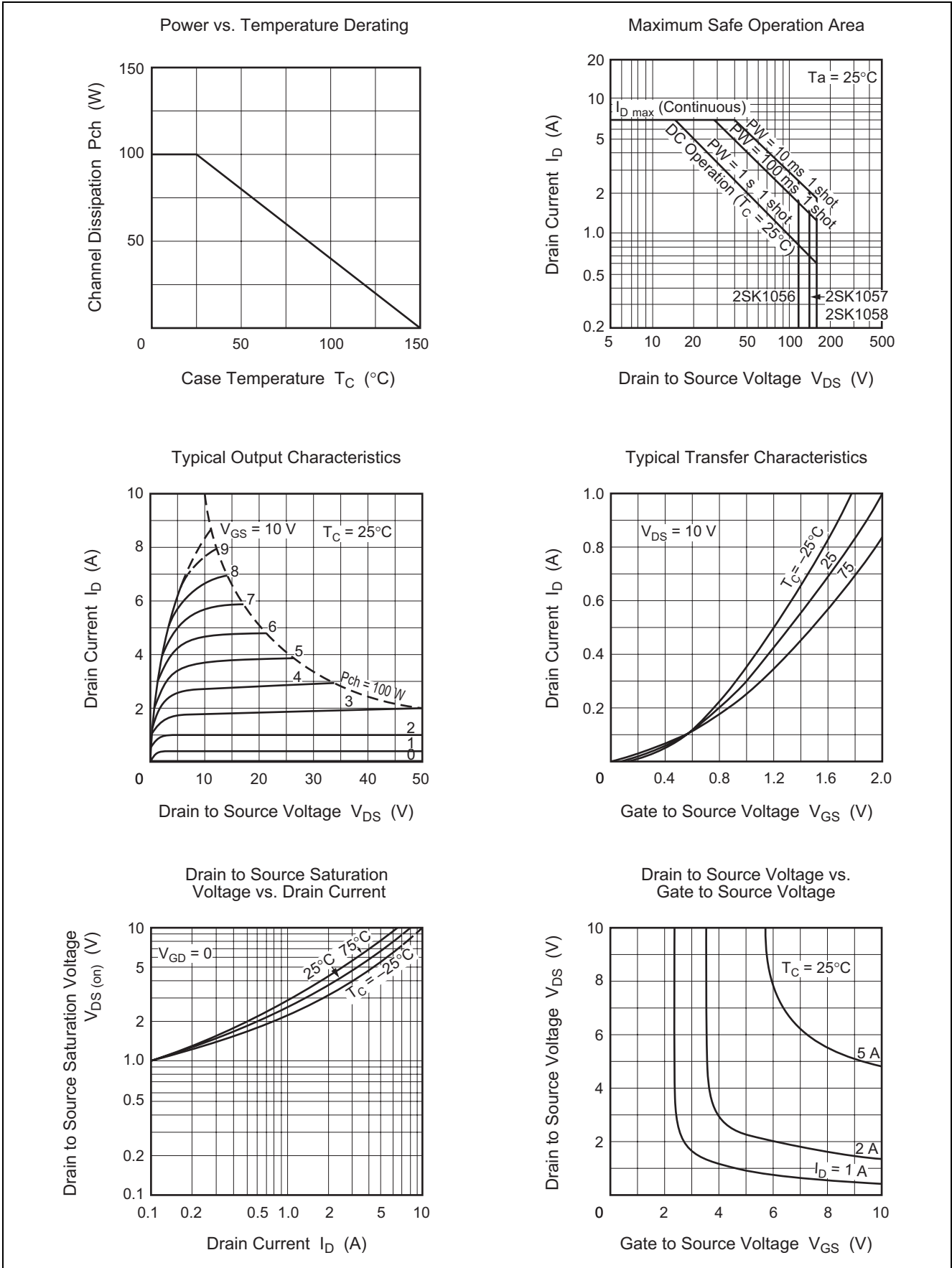
Electrical Characteristics

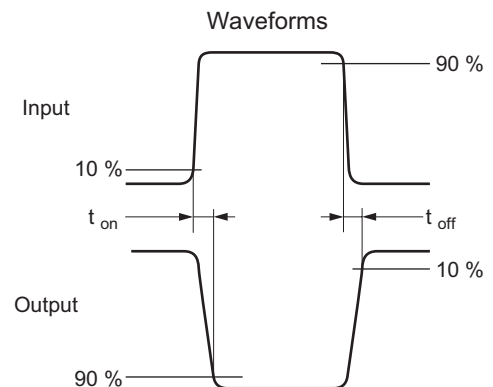
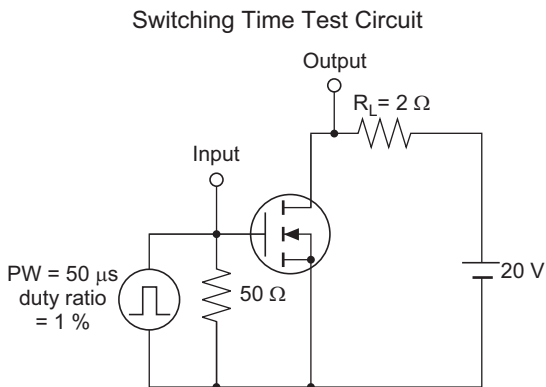
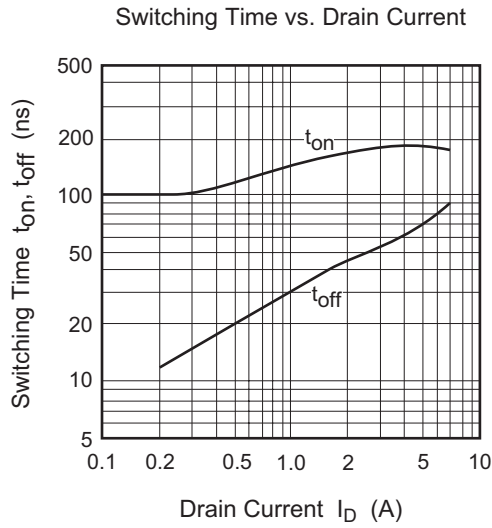
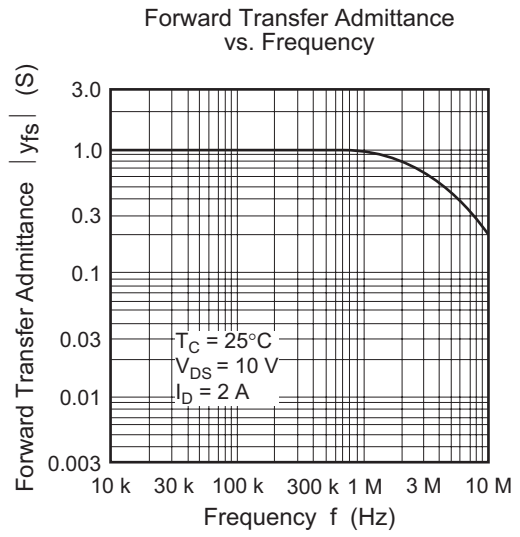
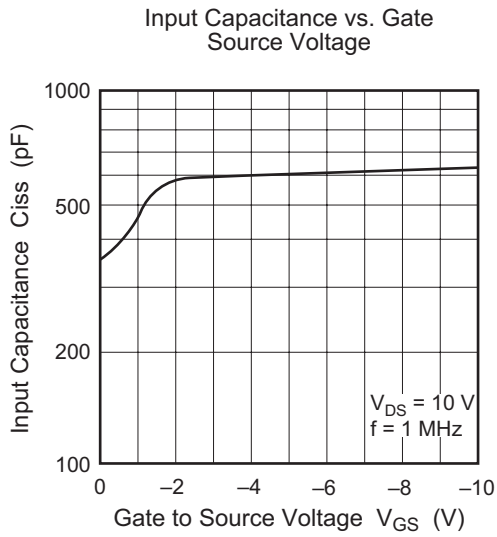
(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Drain to source breakdown voltage	$V_{(BR)DSX}$	120	—	—	V	$I_D = 10 \text{ mA}$, $V_{GS} = -10 \text{ V}$
		140				
		160				
Gate to source breakdown voltage	$V_{(BR)GSS}$	±15	—	—	V	$I_G = \pm 100 \mu\text{A}$, $V_{DS} = 0$
Gate to source cutoff voltage	$V_{GS(off)}$	0.15	—	1.45	V	$I_D = 100 \text{ mA}$, $V_{DS} = 10 \text{ V}$
Drain to source saturation voltage	$V_{DS(sat)}$	—	—	12	V	$I_D = 7 \text{ A}$, $V_{GD} = 0$ *2
Forward transfer admittance	$ y_{fs} $	0.7	1.0	1.4	S	$I_D = 3 \text{ A}$, $V_{DS} = 10 \text{ V}$ *2
Input capacitance	C_{iss}	—	600	—	pF	$V_{GS} = -5 \text{ V}$, $V_{DS} = 10 \text{ V}$, $f = 1 \text{ MHz}$
Output capacitance	C_{oss}	—	350	—	pF	
Reverse transfer capacitance	C_{rss}	—	10	—	pF	
Turn-on time	t_{on}	—	180	—	ns	$V_{DD} = 20 \text{ V}$, $I_D = 4 \text{ A}$
Turn-off time	t_{off}	—	60	—	ns	

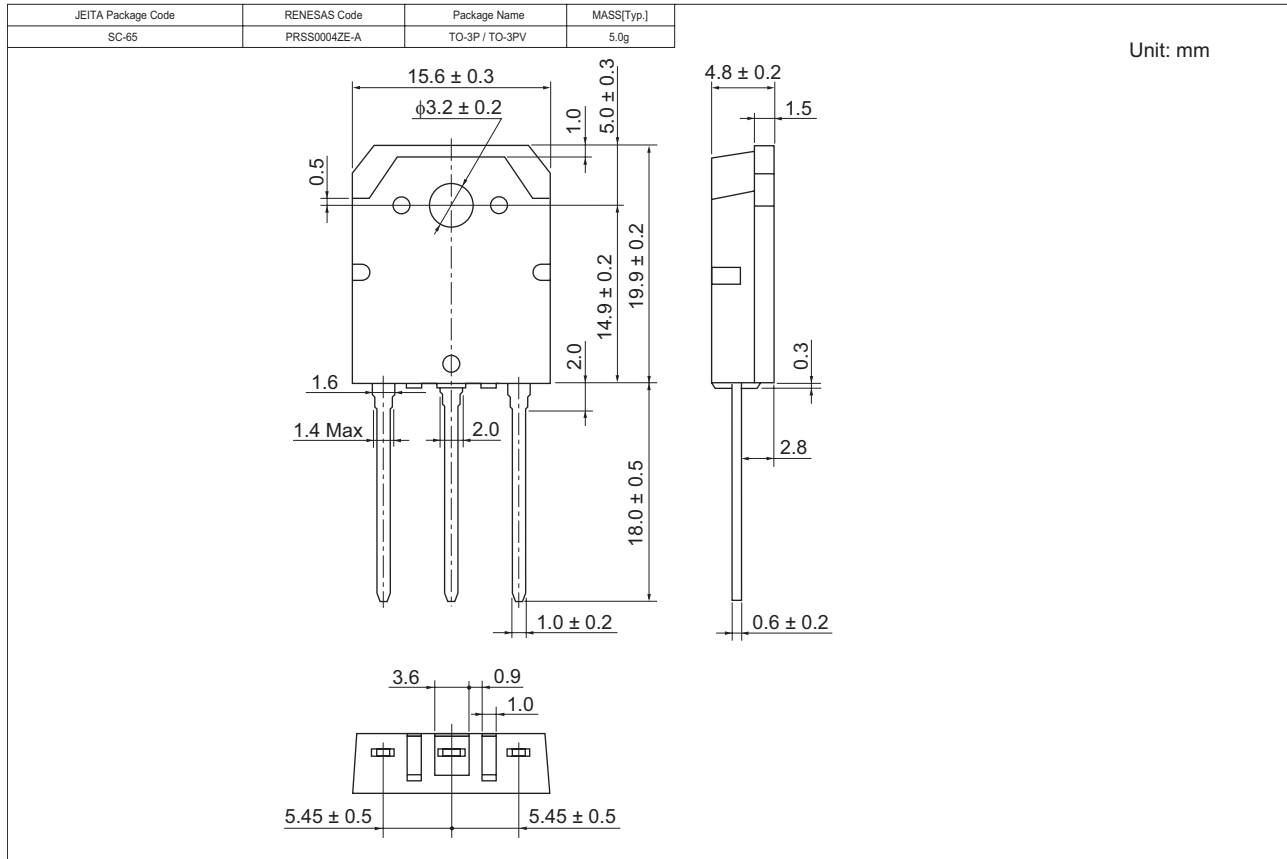
Note: 2. Pulse test

Main Characteristics





Package Dimensions



Ordering Information

Part Name	Quantity	Shipping Container
2SK1056-E	360 pcs	Box (Tube)
2SK1057-E	360 pcs	Box (Tube)
2SK1058-E	360 pcs	Box (Tube)

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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Renesas Technology America, Inc.

450 Holger Way, San Jose, CA 95134-1368, U.S.A
Tel: <1> (408) 382-7500, Fax: <1> (408) 382-7501

Renesas Technology Europe Limited

Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K.
Tel: <44> (1628) 585-100, Fax: <44> (1628) 585-900

Renesas Technology Hong Kong Ltd.

7th Floor, North Tower, World Finance Centre, Harbour City, 1 Canton Road, Tsimshatsui, Kowloon, Hong Kong
Tel: <852> 2265-6688, Fax: <852> 2730-6071

Renesas Technology Taiwan Co., Ltd.

10th Floor, No.99, Fushing North Road, Taipei, Taiwan
Tel: <886> (2) 2715-2888, Fax: <886> (2) 2713-2999

Renesas Technology (Shanghai) Co., Ltd.

Unit2607 Ruijing Building, No.205 Maoming Road (S), Shanghai 200020, China
Tel: <86> (21) 6472-1001, Fax: <86> (21) 6415-2952

Renesas Technology Singapore Pte. Ltd.

1 Harbour Front Avenue, #06-10, Keppel Bay Tower, Singapore 098632
Tel: <65> 6213-0200, Fax: <65> 6278-8001

Renesas Technology Korea Co., Ltd.

Kukje Center Bldg. 18th Fl., 191, 2-ka, Hangang-ro, Yongsan-ku, Seoul 140-702, Korea
Tel: <82> 2-796-3115, Fax: <82> 2-796-2145

Renesas Technology Malaysia Sdn. Bhd.

Unit 906, Block B, Menara Amcorp, Amcorp Trade Centre, No.18, Jalan Persiaran Barat, 46050 Petaling Jaya, Selangor Darul Ehsan, Malaysia
Tel: <603> 7955-9390, Fax: <603> 7955-9510