To our customers,

Old Company Name in Catalogs and Other Documents

On April 1st, 2010, NEC Electronics Corporation merged with Renesas Technology Corporation, and Renesas Electronics Corporation took over all the business of both companies. Therefore, although the old company name remains in this document, it is a valid Renesas Electronics document. We appreciate your understanding.

Renesas Electronics website: http://www.renesas.com

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (http://www.renesas.com)

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2SJ351, 2SJ352

Silicon P Channel MOS FET

REJ03G0860-0200
(Previous: ADE-208-1193)
Rev.2.00
Sep 07, 2005

Description

Low frequency power amplifier

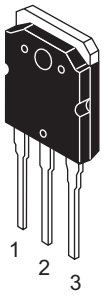
Complementary pair with 2SK2220, 2SK2221

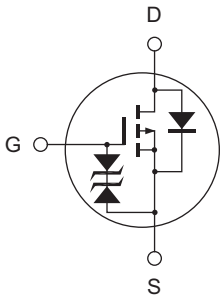
Features

- High power gain
- Excellent frequency response
- High speed switching
- Wide area of safe operation
- Enhancement-mode
- Good complementary characteristics
- Equipped with gate protection diodes

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	Value	Unit
Drain to source voltage	2SJ351	V_{DSX}	–180	V
	2SJ352		–200	
Gate to source voltage		V_{GSS}	±20	V
Drain current		I_D	–8	A
Body to drain diode reverse drain current		I_{DR}	–8	A
Channel dissipation		Pch [Note 1]	100	W
Channel temperature		Tch	150	°C
Storage temperature		Tstg	–55 to +150	°C

Note: 1. Value at Tc = 25°C

Electrical Characteristics

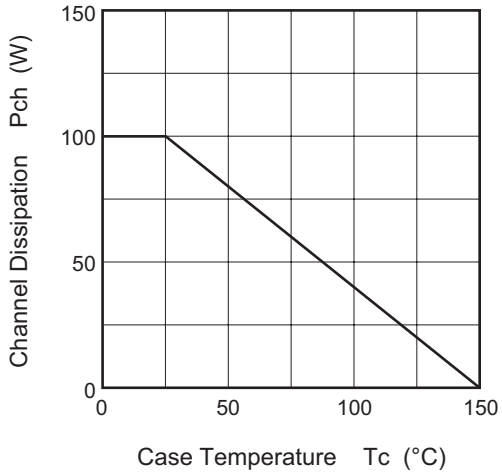
(Ta = 25°C)

Item		Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	2SJ351	$V_{(BR)\ DSX}$	–180	—	—	V	I_D = –10 mA, V_{GS} = 10 V
	2SJ352		–200	—	—	V	
Gate to source breakdown voltage		$V_{(BR)\ GSS}$	±20	—	—	V	I_G = ±100 µA, V_{DS} = 0
Gate to source cutoff voltage		$V_{GS\ (off)}$	–0.15	—	–1.45	V	I_D = –100 mA, V_{DS} = –10 V
Drain to source saturation voltage		$V_{DS\ (sat)}$	—	—	–12	V	I_D = –8 A, V_{GS} = 0 [Note 2]
Forward transfer admittance		$\|y_{fs}\|$	0.7	1.0	1.4	S	I_D = –3 A, V_{DS} = –10 V [Note 2]
Input capacitance		Ciss	—	800	—	pF	V_{GS} = 5 V, V_{DS} = –10 V, f = 1 MHz
Output capacitance		Coss	—	1000	—	pF	
Reverse transfer capacitance		Crss	—	18	—	pF	
Turn-on time		t_{on}	—	320	—	ns	V_{DD} = –30 V I_D = –4 A
Turn-off time		t_{off}	—	120	—	ns	

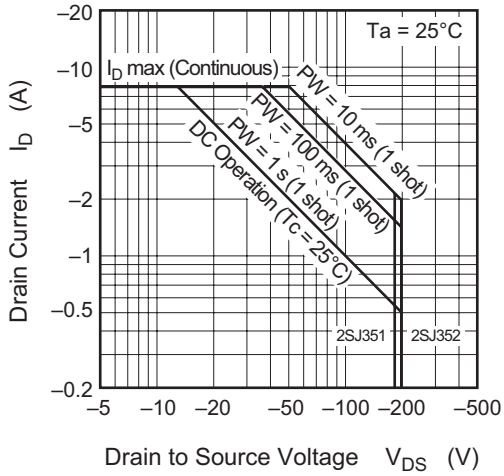
Note: 2. Pulse test

Main Characteristics

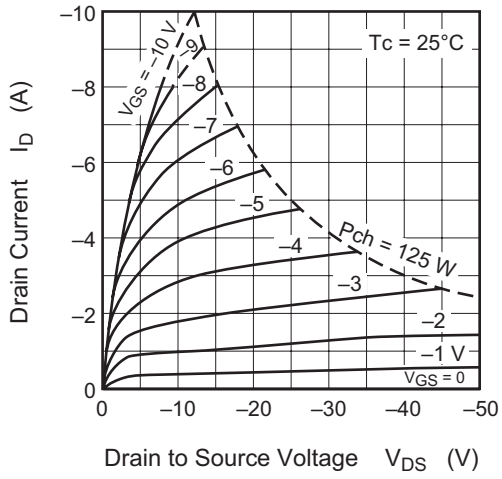
Power vs. Temperature Derating



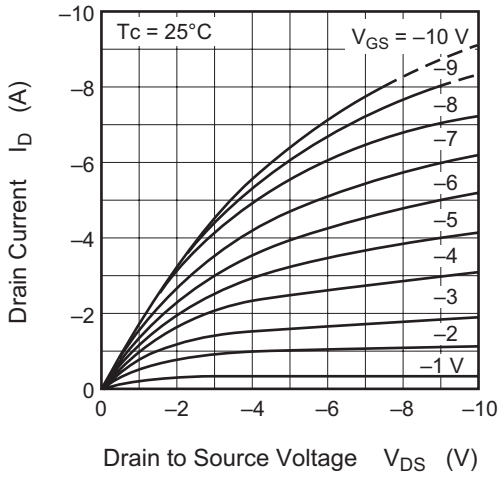
Maximum Safe Operation Area



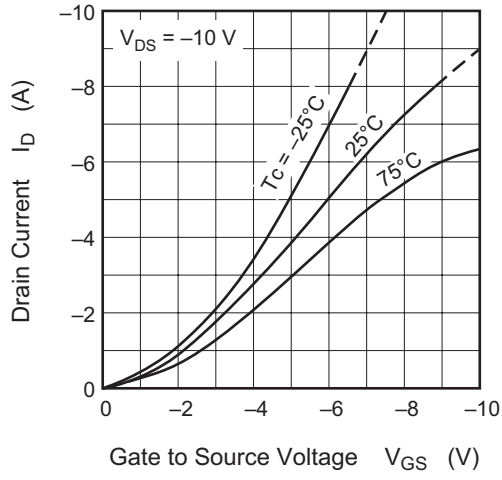
Typical Output Characteristics



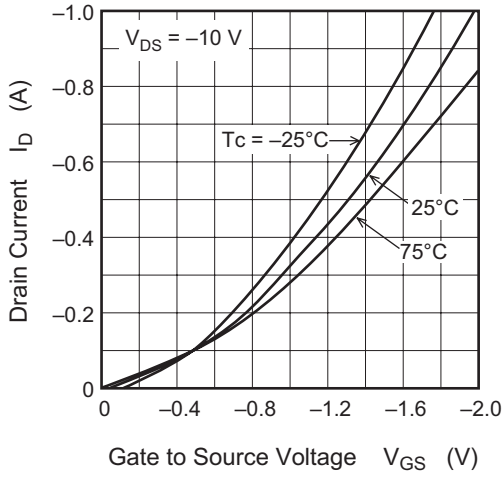
Typical Output Characteristics



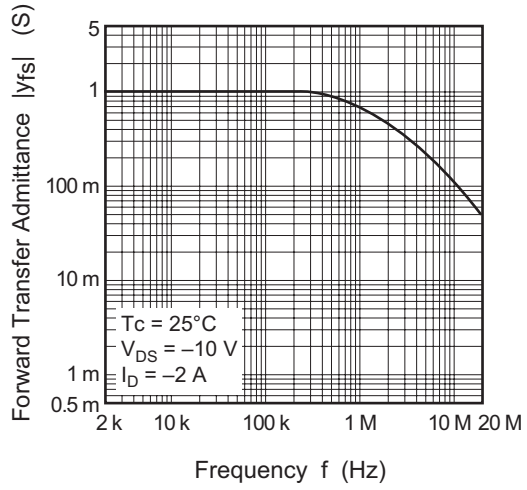
Typical Transfer Characteristics



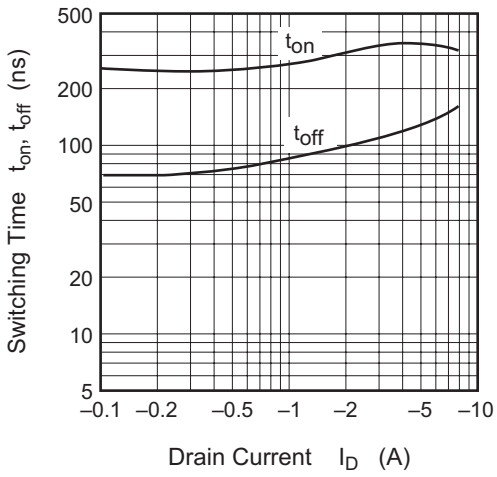
Typical Transfer Characteristics



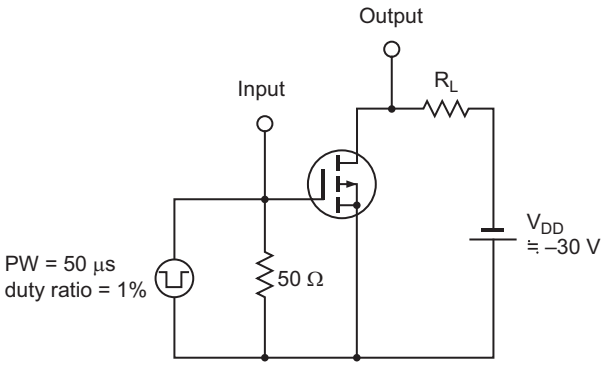
Forward Transfer Admittance vs. Frequency



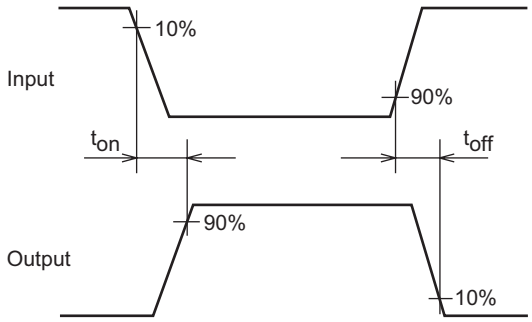
Switching Time vs. Drain Current



Switching Time Test Circuit



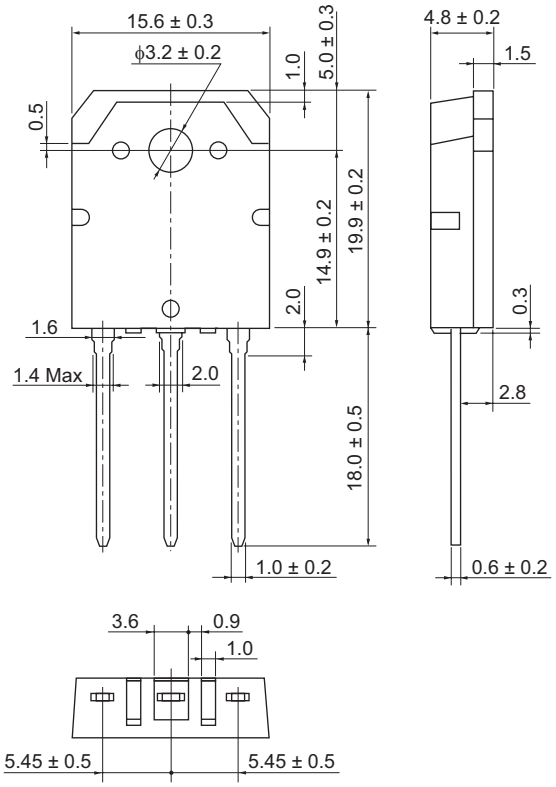
Waveform



Package Dimensions

JEITA Package Code	RENESAS Code	Package Name	MASS[Typ.]
SC-65	PRSS0004ZE-A	TO-3P / TO-3PV	5.0g

Unit: mm



Ordering Information

Part Name	Quantity	Shipping Container
2SJ351-E	360 pcs	Box (Tube)
2SJ352-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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http://www.renesas.com

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Colophon .3.0