

To our customers,

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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

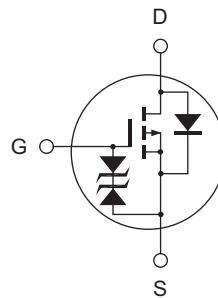
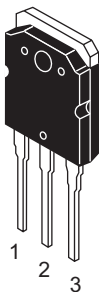
Complementary pair with 2SK2220, 2SK2221

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		P_{ch} ^{Note 1}	100	W
Channel temperature		T_{ch}	150	°C
Storage temperature		T_{stg}	-55 to +150	°C

Note: 1. Value at Tc = 25°C

Electrical Characteristics

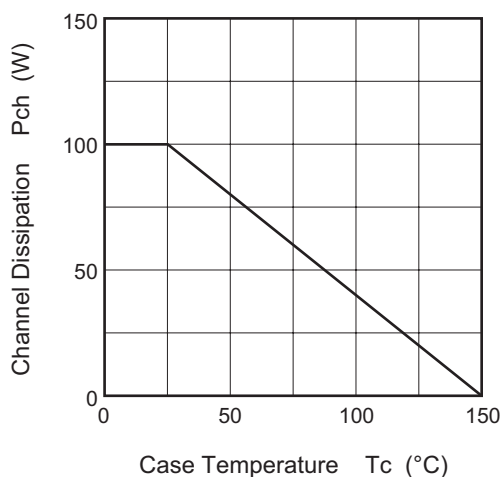
(Ta = 25°C)

Item		Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	2SJ351	$V_{(BR)DSX}$	-180	—	—	V	$I_D = -10\text{ mA}$, $V_{GS} = 10\text{ V}$
	2SJ352		-200	—	—	V	
Gate to source breakdown voltage		$V_{(BR)GSS}$	±20	—	—	V	$I_G = \pm 100\text{ }\mu\text{A}$, $V_{DS} = 0$
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	$I_D = -8\text{ A}$, $V_{GS} = 0$ ^{Note 2}
Forward transfer admittance		$ y_{fs} $	0.7	1.0	1.4	S	$I_D = -3\text{ A}$, $V_{DS} = -10\text{ V}$ ^{Note 2}
Input capacitance		C_{iss}	—	800	—	pF	$V_{GS} = 5\text{ V}$, $V_{DS} = -10\text{ V}$, $f = 1\text{ MHz}$
Output capacitance		C_{oss}	—	1000	—	pF	
Reverse transfer capacitance		C_{rss}	—	18	—	pF	
Turn-on time		t_{on}	—	320	—	ns	$V_{DD} = -30\text{ V}$, $I_D = -4\text{ A}$
Turn-off time		t_{off}	—	120	—	ns	

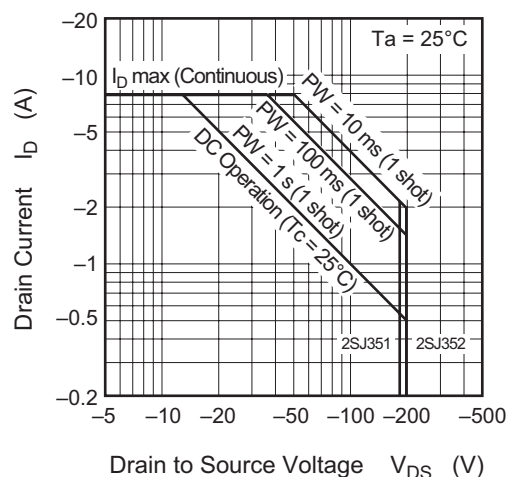
Note: 2. Pulse test

Main Characteristics

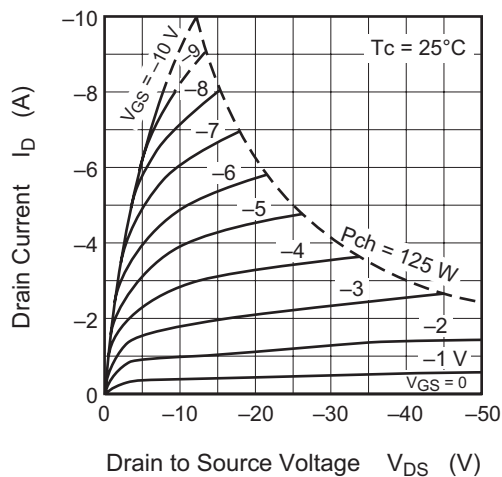
Power vs. Temperature Derating



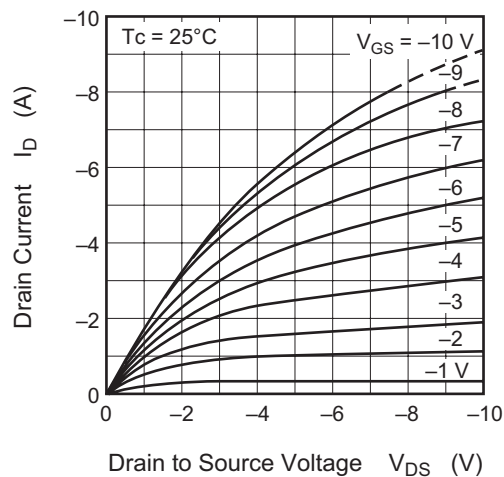
Maximum Safe Operation Area



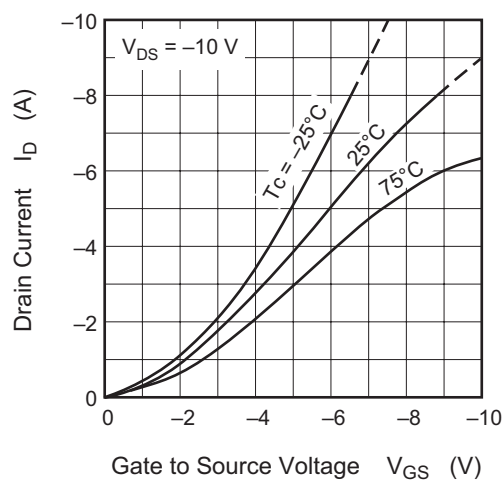
Typical Output Characteristics



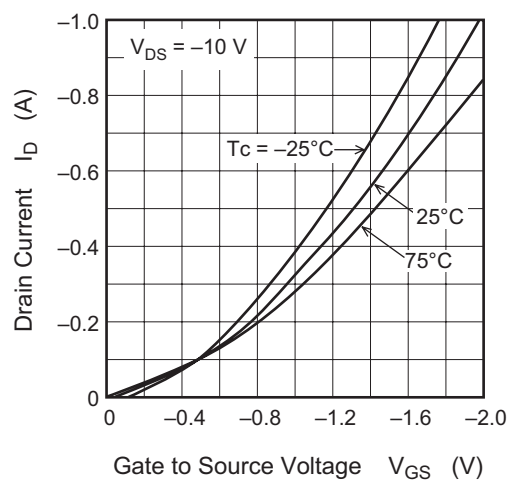
Typical Output Characteristics

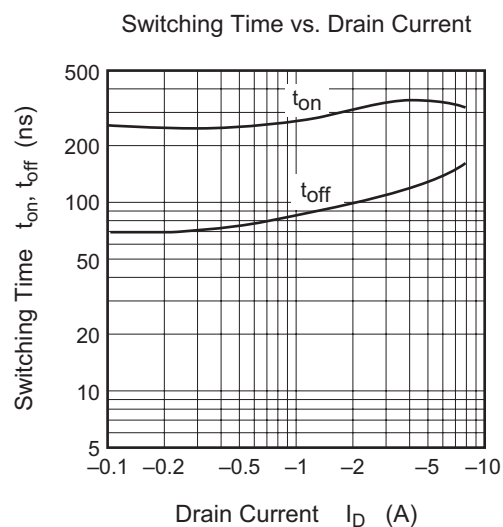
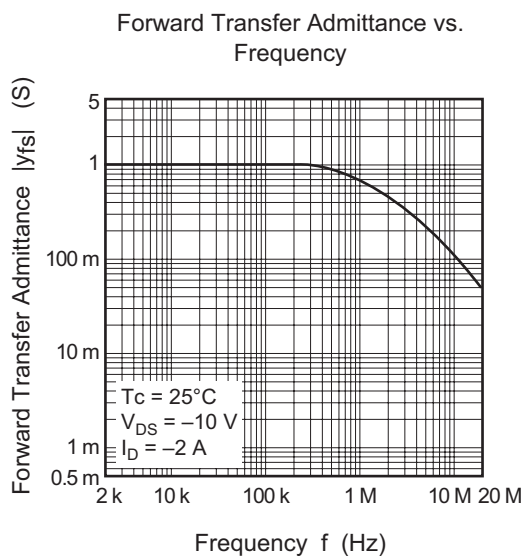


Typical Transfer Characteristics

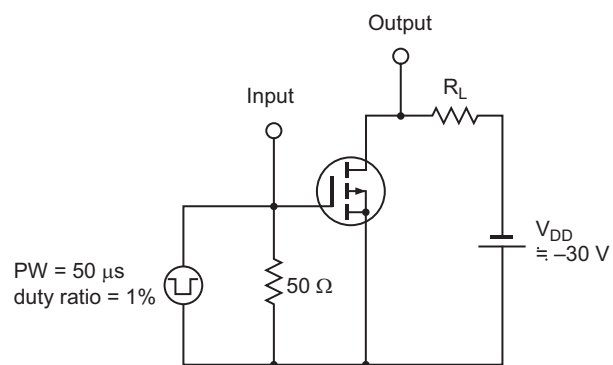


Typical Transfer Characteristics

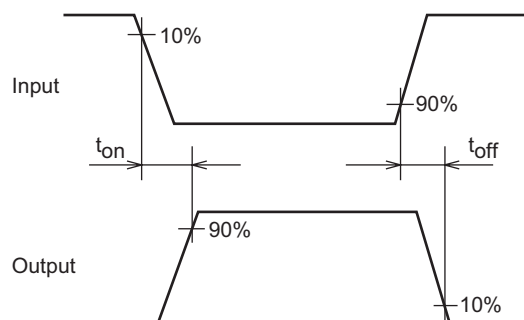




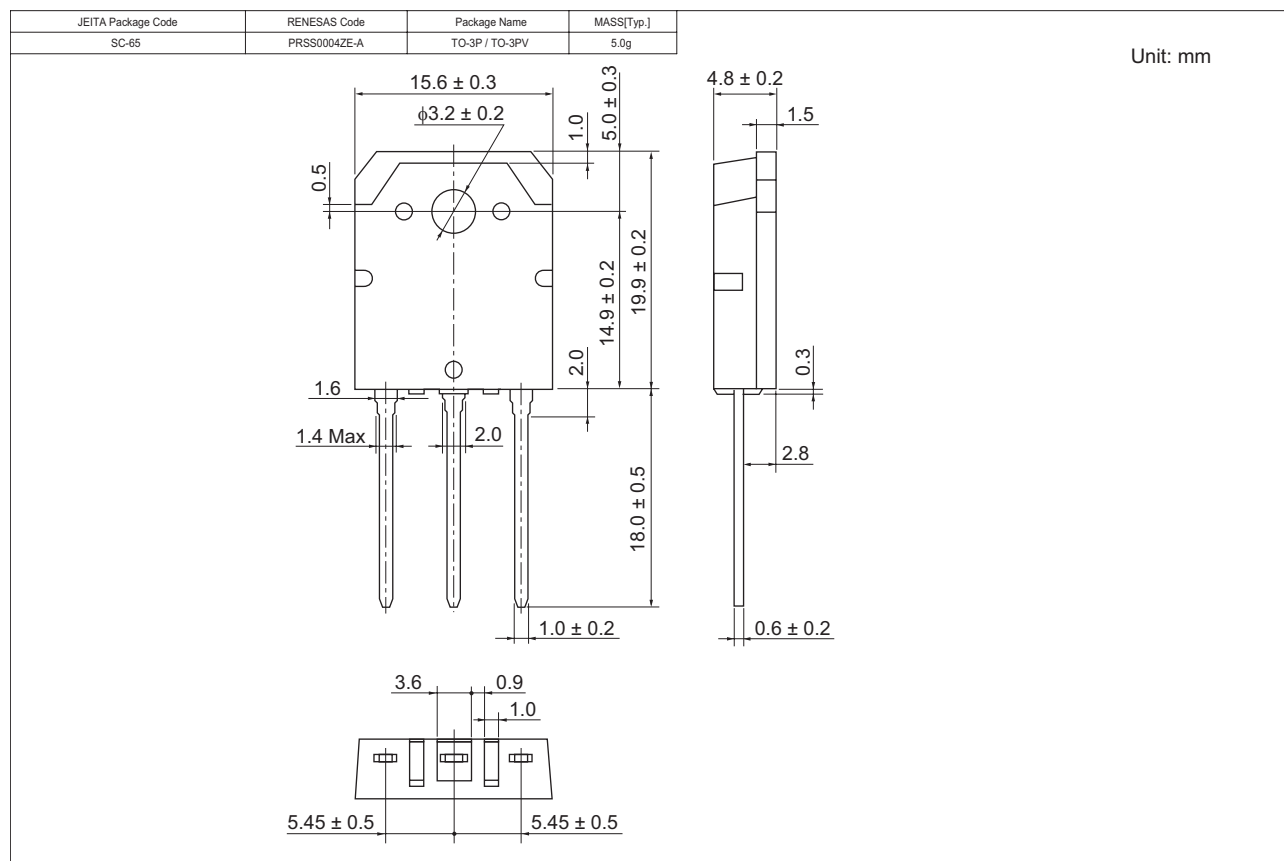
Switching Time Test Circuit



Waveform



Package Dimensions



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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