

To all our customers

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Renesas Technology Corp.  
Customer Support Dept.  
April 1, 2003

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Keep safety first in your circuit designs!

1. Renesas Technology Corporation puts the maximum effort into making semiconductor products better and more reliable, but there is always the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal injury, fire or property damage.

Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of nonflammable material or (iii) prevention against any malfunction or mishap.

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# 2SJ351, 2SJ352

Silicon P-Channel MOS FET



ADE-208-1193 (Z)  
1st. Edition  
Mar. 2001

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## Application

Low frequency power amplifier

Complementary pair with 2SK2220, 2SK2221

## Features

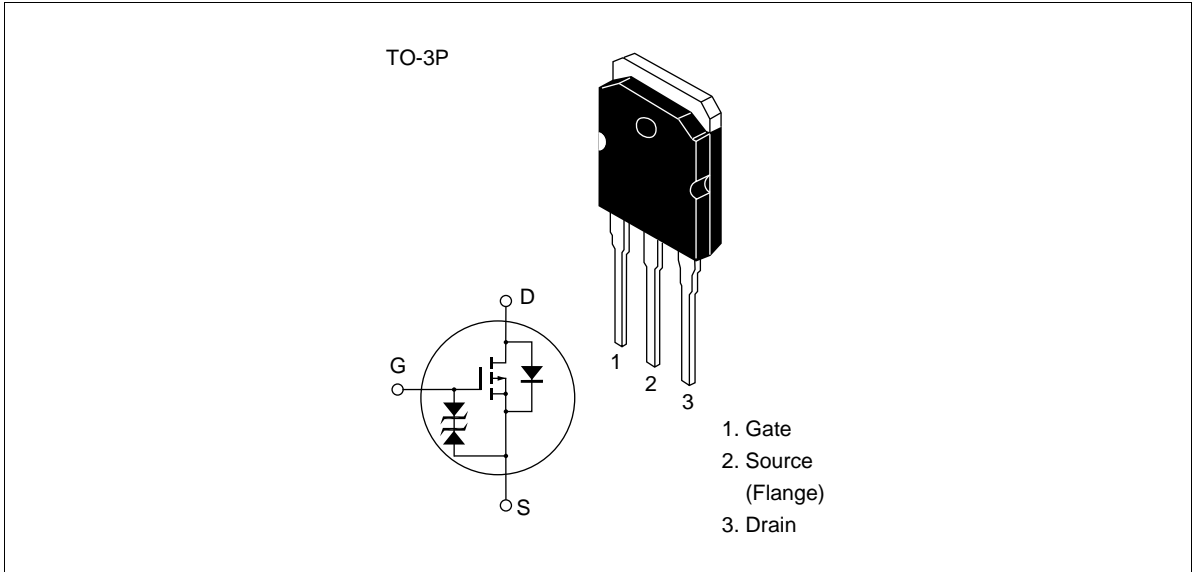
- High power gain
- Excellent frequency response
- High speed switching
- Wide area of safe operation
- Enhancement-mode
- Good complementary characteristics
- Equipped with gate protection diodes

## Ordering Information

Type No.	$V_{DSX}$
2SJ351	-180 V
2SJ352	-200 V

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## Outline



## Absolute Maximum Ratings (Ta = 25°C)

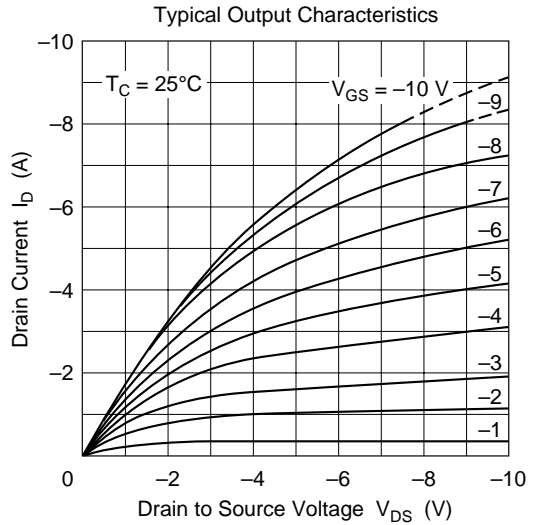
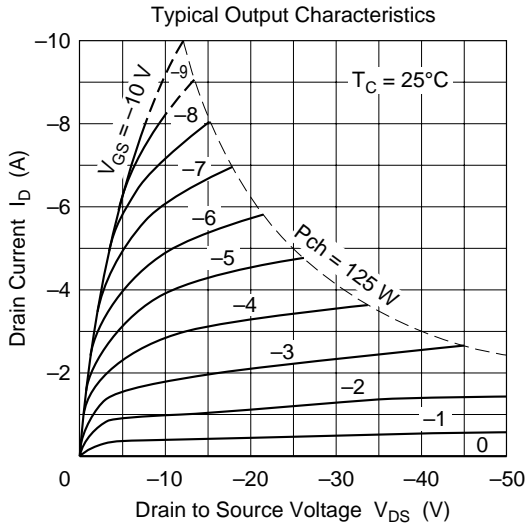
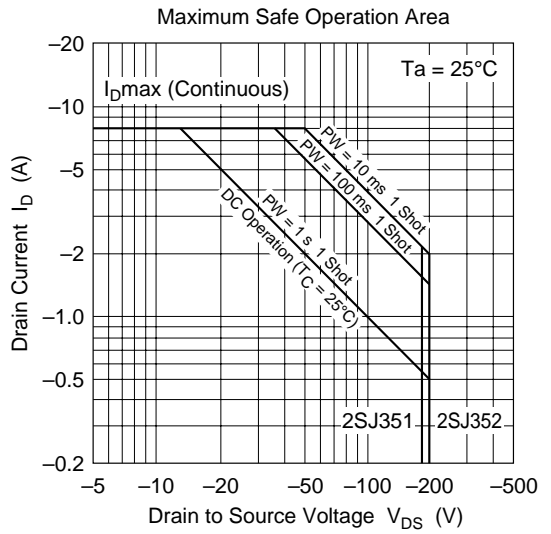
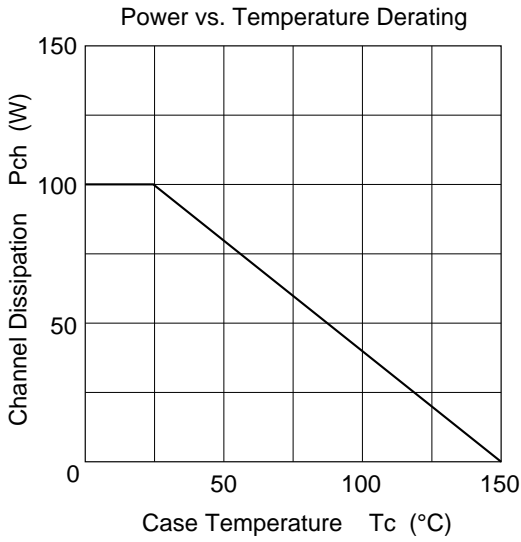
Item		Symbol	Ratings	Unit
Drain to source voltage	2SJ351	$V_{DSX}$	-180	V
	2SJ352		-200	
Gate to source voltage		$V_{GSS}$	±20	V
Drain current		$I_D$	-8	A
Body to drain diode reverse drain current		$I_{DR}$	-8	A
Channel dissipation		$P_{ch}^{*1}$	100	W
Channel temperature		$T_{ch}$	150	°C
Storage temperature		$T_{stg}$	-55 to +150	°C

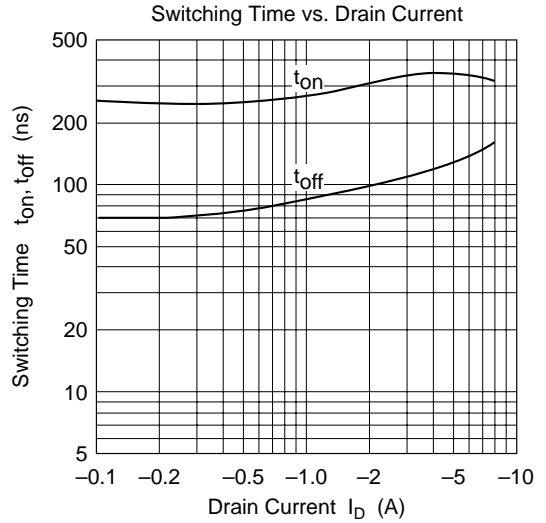
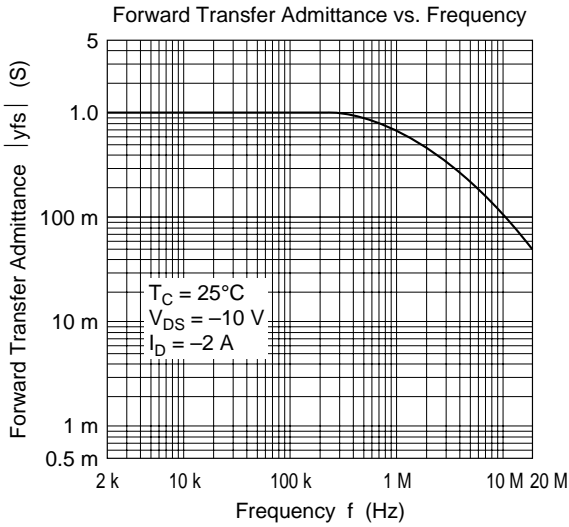
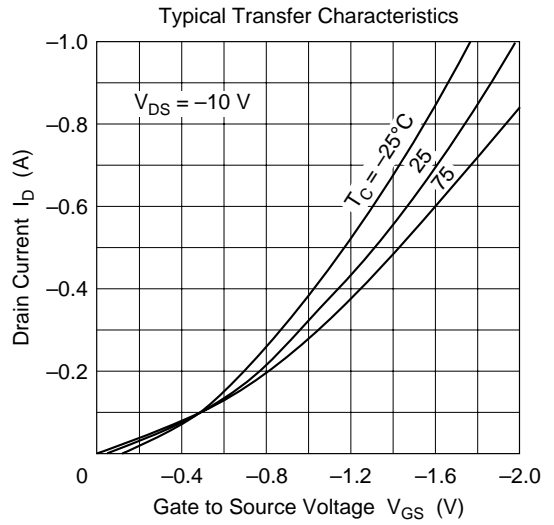
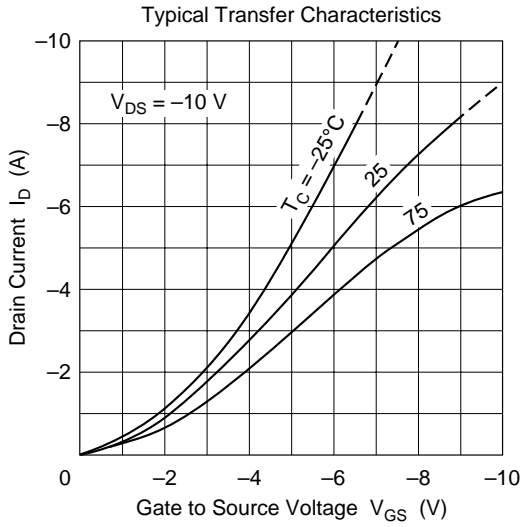
Note: 1. Value at  $T_C = 25^\circ\text{C}$

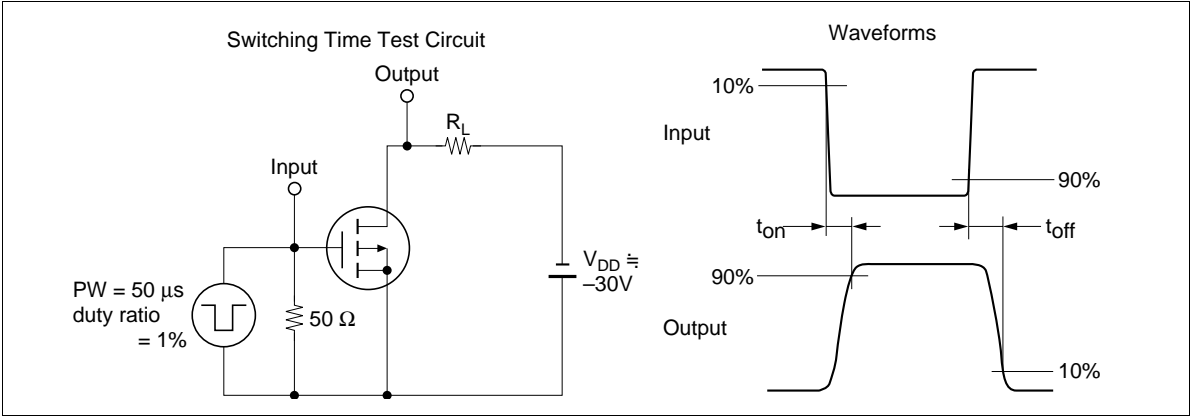
## Electrical Characteristics (Ta = 25°C)

Item		Symbol	Min	Typ	Max	Unit	Test conditions
Drain to source breakdown voltage	2SJ351	$V_{(BR)DSX}$	-180	—	—	V	$I_D = -10 \text{ mA}$ , $V_{GS} = 10 \text{ V}$
	2SJ352		-200	—	—		
Gate to source breakdown voltage		$V_{(BR)GSS}$	$\pm 20$	—	—	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	$I_D = -8 \text{ A}$ , $V_{GD} = 0^{*1}$
Forward transfer admittance		$ y_{fs} $	0.7	1.0	1.4	S	$I_D = -3 \text{ A}$ , $V_{DS} = -10 \text{ V}^{*1}$
Input capacitance		$C_{iss}$	—	800	—	pF	$V_{GS} = 5 \text{ V}$ , $V_{DS} = -10 \text{ V}$ ,
Output capacitance		$C_{oss}$	—	1000	—	pF	$f = 1 \text{ MHz}$
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: 1. Pulse test



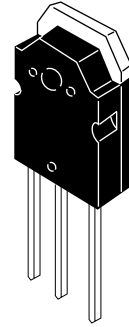
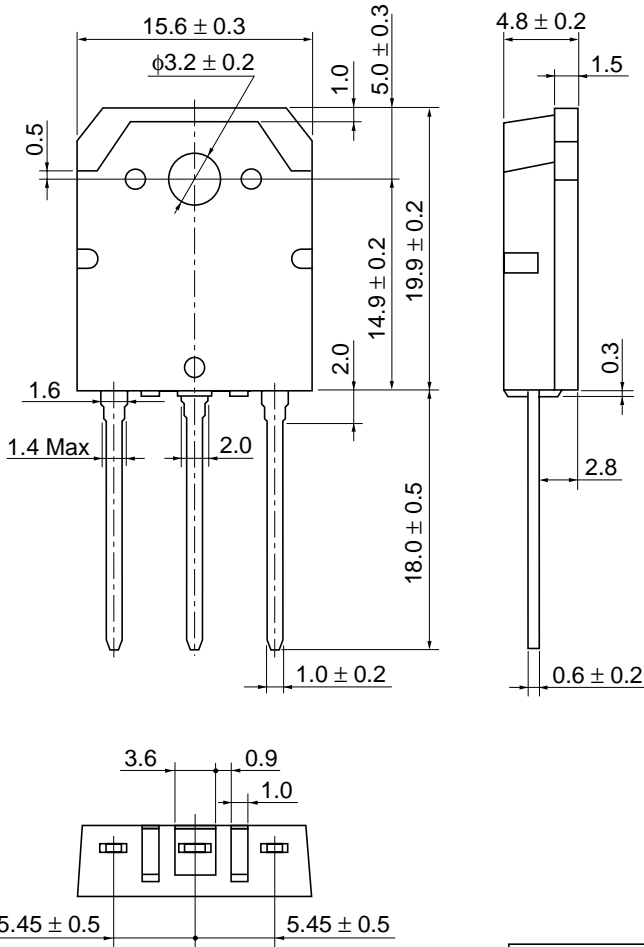






Package Dimensions

As of January, 2001  
Unit: mm



Hitachi Code	TO-3P
JEDEC	—
EIAJ	Conforms
Mass (reference value)	5.0 g

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