

# 2SJ76, 2SJ77, 2SJ78, 2SJ79

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## Silicon P Channel MOS FET

REJ03G0122-0200  
(Previous: ADE-208-1179)  
Rev.2.00  
Sep 07, 2005

### Description

High frequency and low frequency power amplifier, high speed power switching

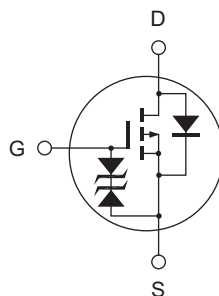
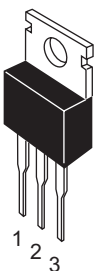
Complementary pair with 2SK213, 2SK214, 2SK215, 2SK216

### Features

- Suitable for direct mounting
- High forward transfer admittance
- Excellent frequency response
- Enhancement-mode

### Outline

RENESAS Package code: PRSS0004AC-A  
(Package name: TO-220AB)



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

## Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Drain to source voltage	2SJ76	-140	V
	2SJ77	-160	
	2SJ78	-180	
	2SJ79	-200	
Gate to source voltage	V <sub>GSS</sub>	±15	V
Drain current	I <sub>D</sub>	-500	mA
Body to drain diode reverse drain current	I <sub>DR</sub>	-500	mA
Channel dissipation	P <sub>ch</sub>	1.75	W
	P <sub>ch</sub> <sup>Note 1</sup>	30	W
Channel temperature	T <sub>ch</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-45 to +150	°C

Note: 1. Value at Tc = 25°C

## Electrical Characteristics

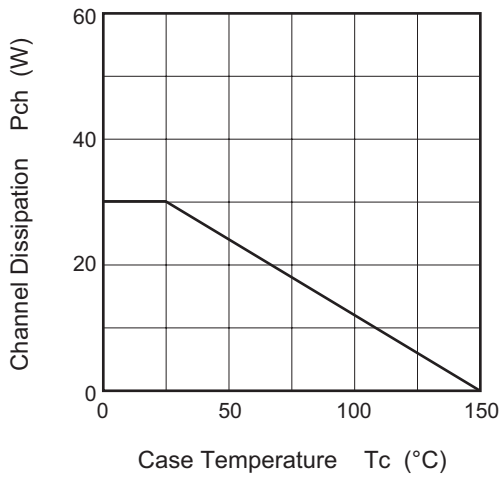
(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	2SJ76	-140	—	—	V	V <sub>GS</sub> = 2 V, I <sub>D</sub> = -1 mA
	2SJ77	-160	—	—	V	
	2SJ78	-180	—	—	V	
	2SJ79	-200	—	—	V	
Gate to source breakdown voltage	V <sub>(BR) GSS</sub>	±15	—	—	V	I <sub>G</sub> = ±10 μA, V <sub>DS</sub> = 0
Gate to source cutoff voltage	V <sub>GS (on)</sub>	-0.2	—	-1.5	V	I <sub>D</sub> = -10 mA, V <sub>DS</sub> = -10 V <sup>Note 2</sup>
Drain to source saturation voltage	V <sub>DS (sat)</sub>	—	—	-2.0	V	I <sub>D</sub> = -10 mA, V <sub>GS</sub> = 0 <sup>Note 2</sup>
Forward transfer admittance	y <sub>fs</sub>	20	35	—	mS	I <sub>D</sub> = -10 mA, V <sub>DS</sub> = -20 V <sup>Note 2</sup>
Input capacitance	C <sub>iss</sub>	—	120	—	pF	V <sub>DS</sub> = -10 V, I <sub>D</sub> = -10 mA, f = 1 MHz
Reverse transfer capacitance	C <sub>rss</sub>	—	4.8	—	pF	

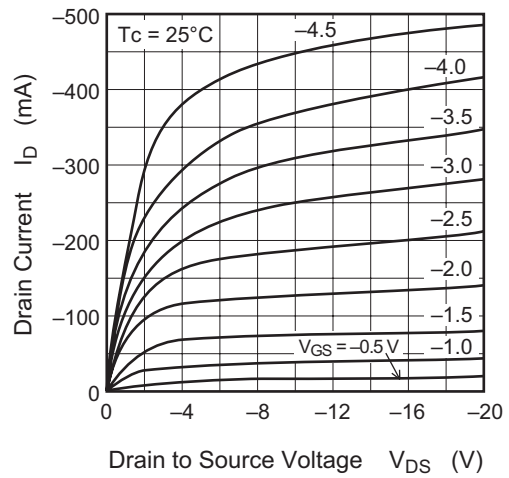
Note: 2. Pulse test

Main Characteristics

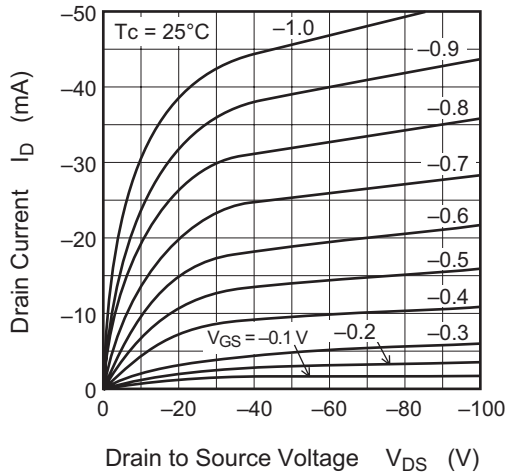
Power vs. Temperature Derating



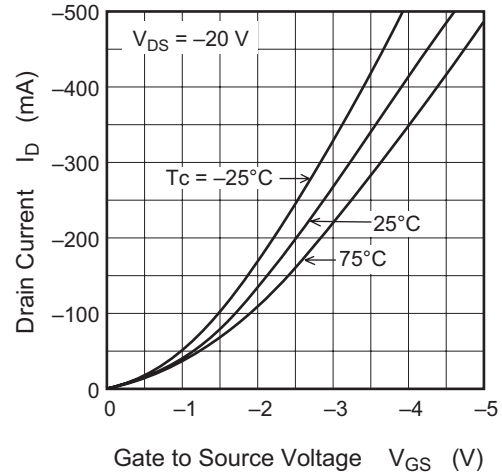
Typical Output Characteristics



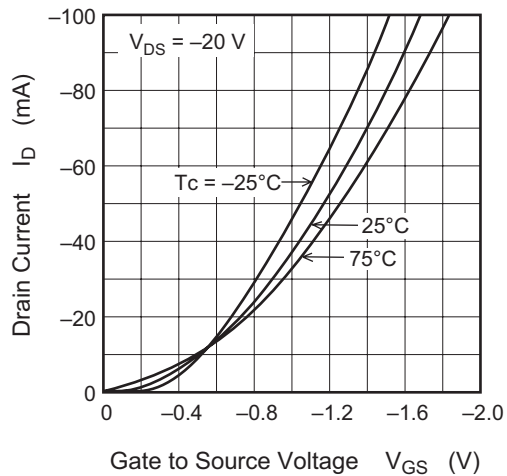
Typical Output Characteristics



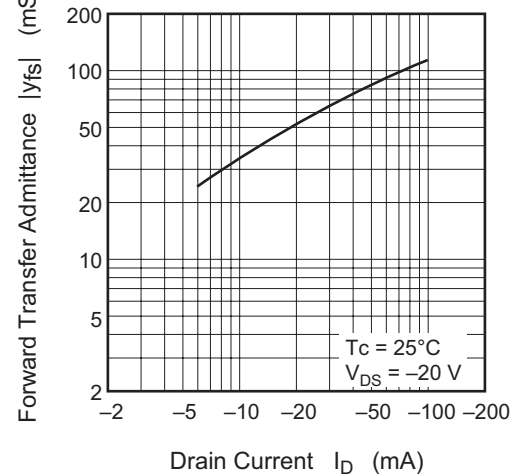
Typical Transfer Characteristics

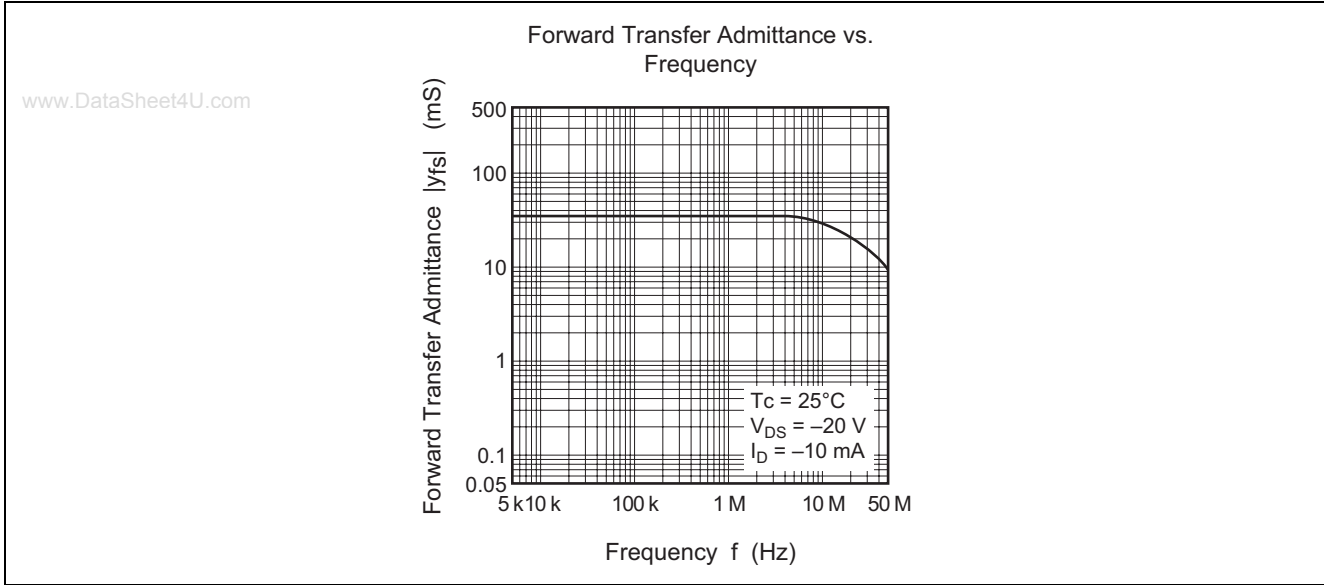


Typical Transfer Characteristics

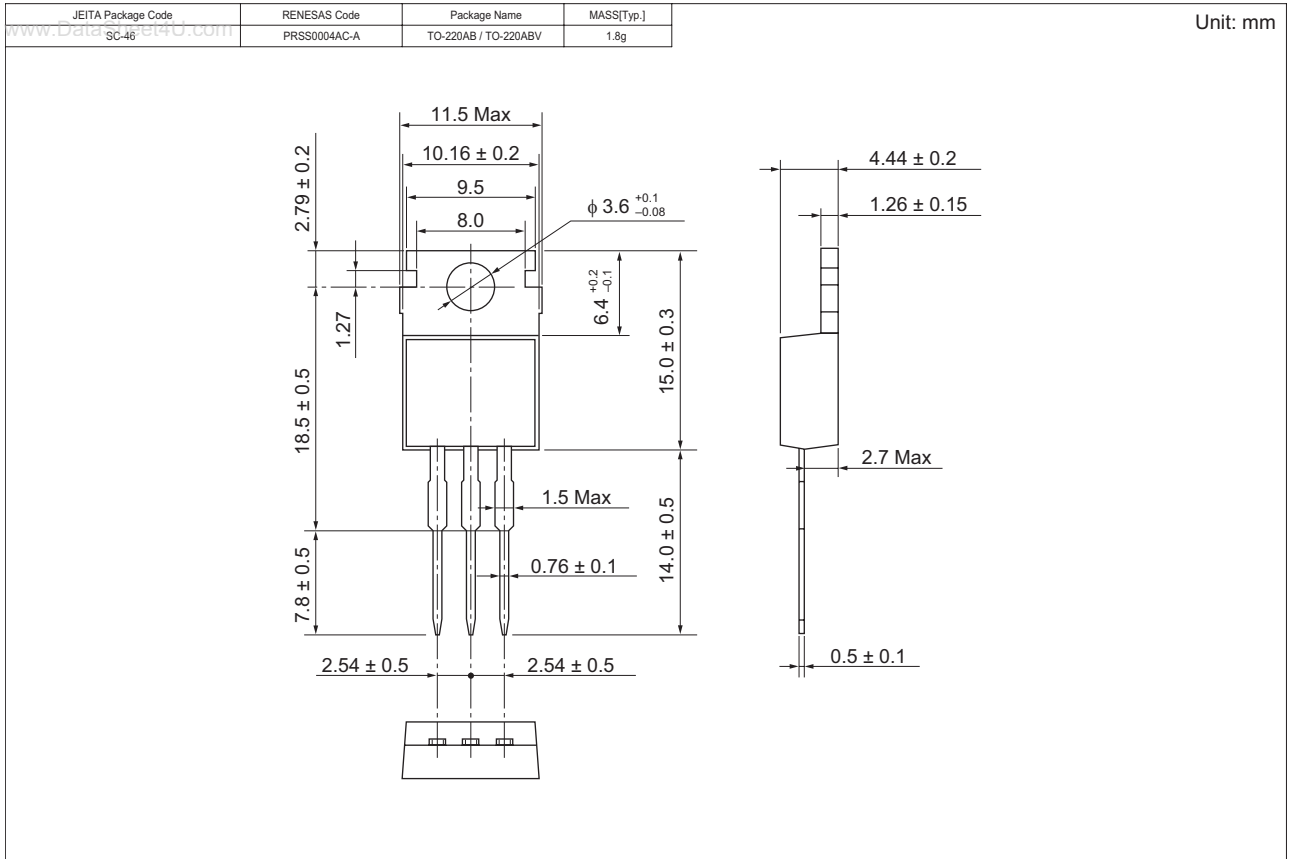


Forward Transfer Admittance vs. Drain Current





### Package Dimensions



### Ordering Information

Part Name	Quantity	Shipping Container
2SJ76-E	500 pcs	Box (Sack)
2SJ77-E	500 pcs	Box (Sack)
2SJ78-E	500 pcs	Box (Sack)
2SJ79-E	500 pcs	Box (Sack)

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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