

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

Silicon P-Channel MOS FET

# HITACHI

## Application

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

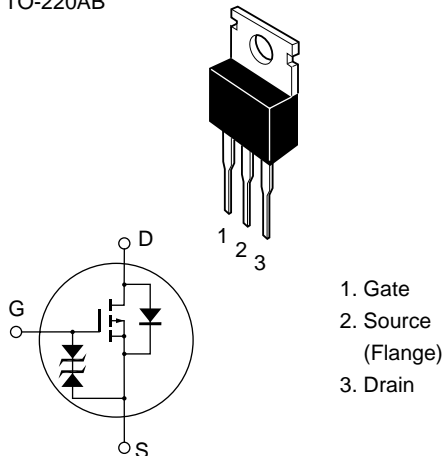
Complementary pair with 2SK213, 2SK214, 2SK215, 2SK216

## Features

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

## Outline

TO-220AB



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

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

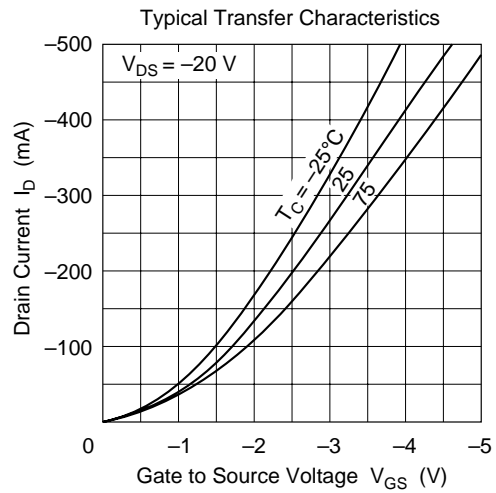
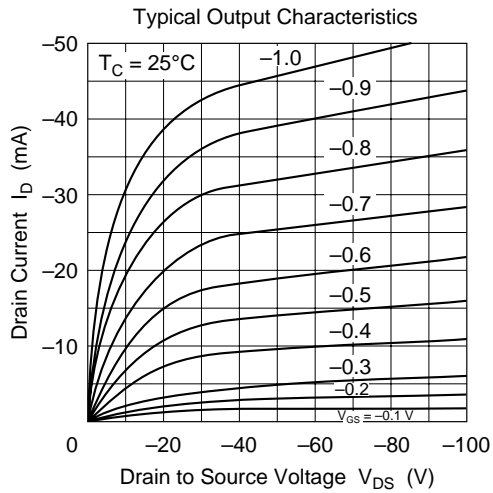
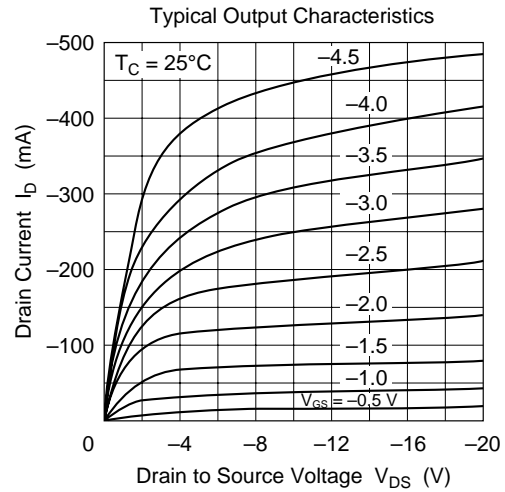
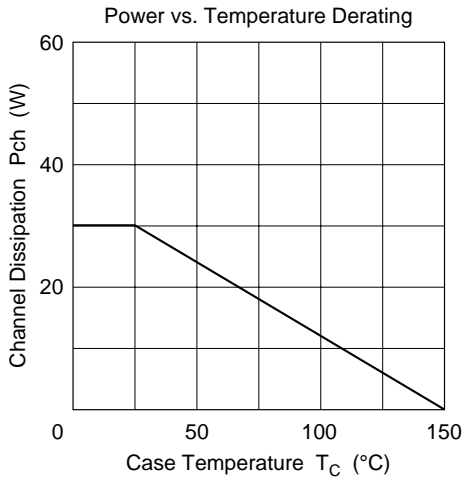
Item		Symbol	Ratings	Unit
Drain to source voltage	2SJ76	$V_{DSX}$	-140	V
	2SJ77		-160	
	2SJ78		-180	
	2SJ79		-200	
Gate to source voltage		$V_{GSS}$	±15	V
Drain current		$I_D$	-500	mA
Body to drain diode reverse drain current		$I_{DR}$	-500	mA
Channel dissipation		Pch	1.75	W
		Pch* <sup>1</sup>	30	W
Channel temperature		Tch	150	°C
Storage temperature		Tstg	-45 to +150	°C

Note: 1. Value at T<sub>C</sub> = 25°C

### Electrical Characteristics (Ta = 25°C)

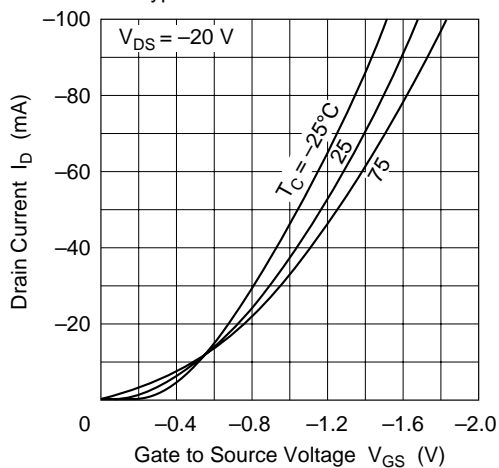
Item		Symbol	Min	Typ	Max	Unit	Test conditions
Drain to source breakdown voltage	2SJ76	$V_{(BR)DSX}$	-140	—	—	V	$V_{GS} = 2\text{ V}, I_D = -1\text{ mA}$
	2SJ77		-160	—	—	V	
	2SJ78		-180	—	—	V	
	2SJ79		-200	—	—	V	
Gate to source breakdown voltage		$V_{(BR)GSS}$	±15	—	—	V	$I_G = \pm 10\text{ }\mu\text{A}, V_{DS} = 0$
Gate to source voltage		$V_{GS(on)}$	-0.2	—	-1.5	V	$I_D = -10\text{ mA}, V_{DS} = -10\text{ V}^{*1}$
Drain to source saturation voltage		$V_{DS(sat)}$	—	—	-2.0	V	$I_D = -10\text{ mA}, V_{GD} = 0^{*1}$
Forward transfer admittance		$ y_{fs} $	20	35	—	mS	$I_D = -10\text{ mA}, V_{DS} = -20\text{ V}^{*1}$
Input capacitance		Ciss	—	120	—	pF	$V_{DS} = -10\text{ V}, I_D = -10\text{ mA},$
Reverse transfer capacitance		Crss	—	4.8	—	pF	$f = 1\text{ MHz}$

Note: 1. Pulse test

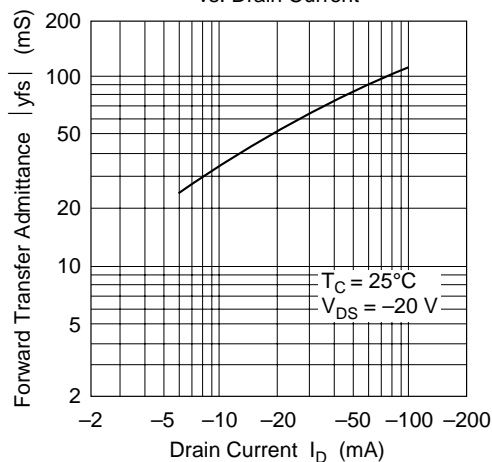


# 2SJ76, 2SJ77, 2SJ78, 2SJ79

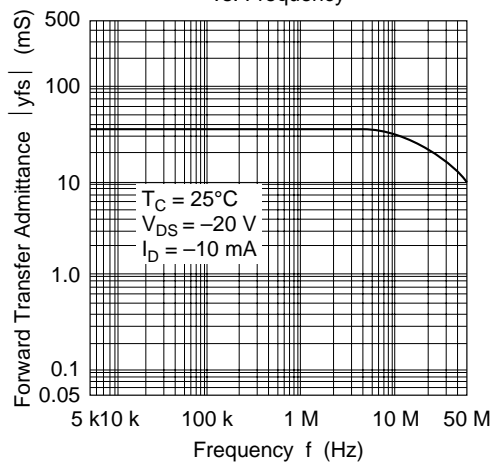
Typical Transfer Characteristics



Forward Transfer Admittance vs. Drain Current



Forward Transfer Admittance vs. Frequency





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