

2SJ76, 2SJ77, 2SJ78, 2SJ79

Silicon P-Channel MOS FET

HITACHI

ADE-208-1179 (Z)

1st. Edition

Mar. 2001

Application

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

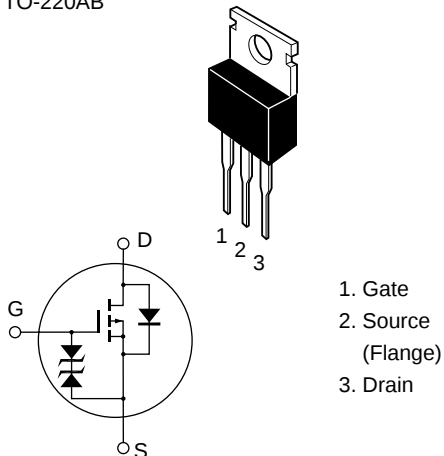
Complementary pair with 2SK213, 2SK214, 2SK215, 2SK216

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* ¹	30	W
Channel temperature		Tch	150	°C
Storage temperature		Tstg	-45 to +150	°C

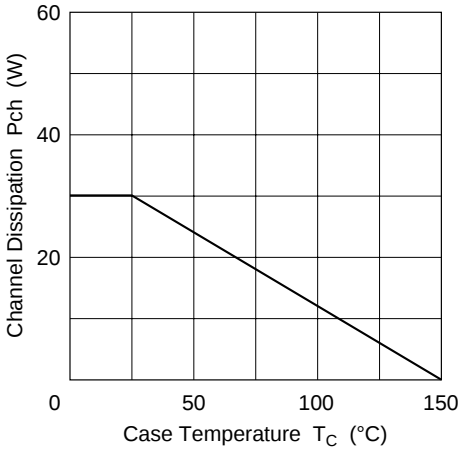
Note: 1. Value at T_c = 25°C

Electrical Characteristics (Ta = 25°C)

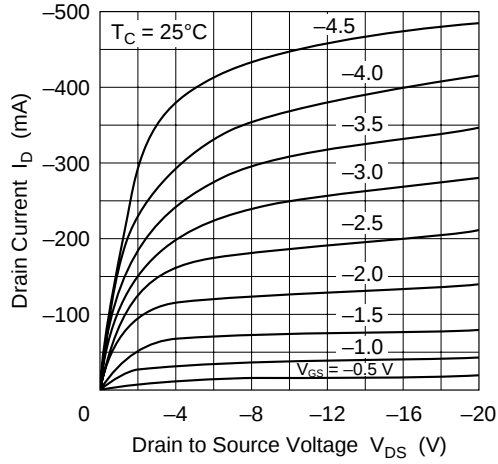
Item		Symbol	Min	Typ	Max	Unit	Test conditions
Drain to source breakdown voltage	2SJ76	$V_{(BR)DSX}$	-140	—	—	V	$V_{GS} = 2\text{ V}, I_D = -1\text{ mA}$
	2SJ77		-160	—	—	V	
	2SJ78		-180	—	—	V	
	2SJ79		-200	—	—	V	
Gate to source breakdown voltage		$V_{(BR)GSS}$	±15	—	—	V	$I_G = \pm 10\text{ }\mu\text{A}, V_{DS} = 0$
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

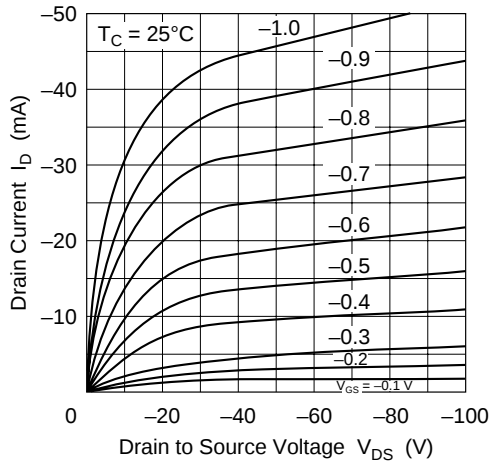
Power vs. Temperature Derating



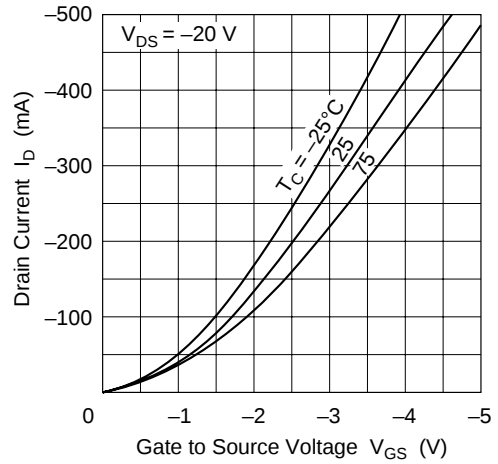
Typical Output Characteristics



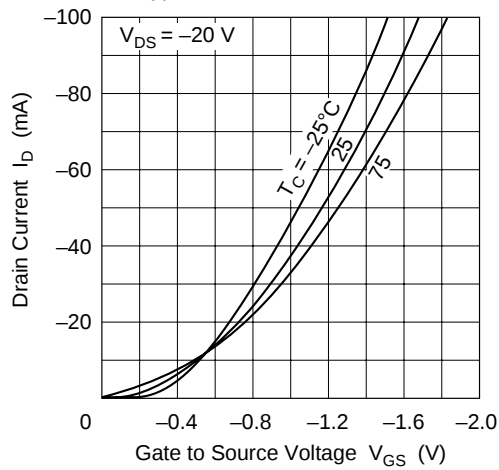
Typical Output Characteristics



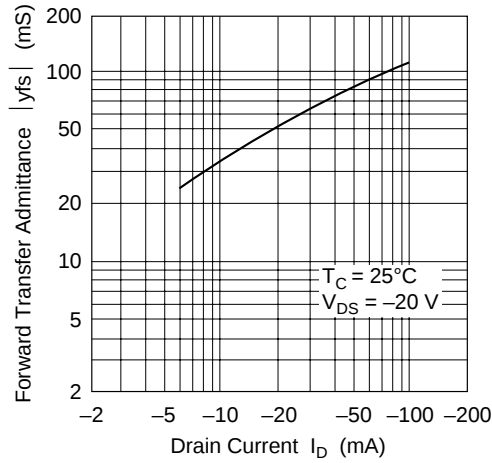
Typical Transfer Characteristics



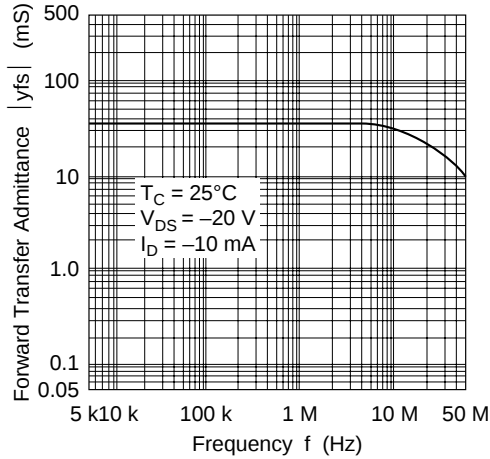
Typical Transfer Characteristics



Forward Transfer Admittance vs. Drain Current

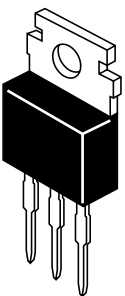
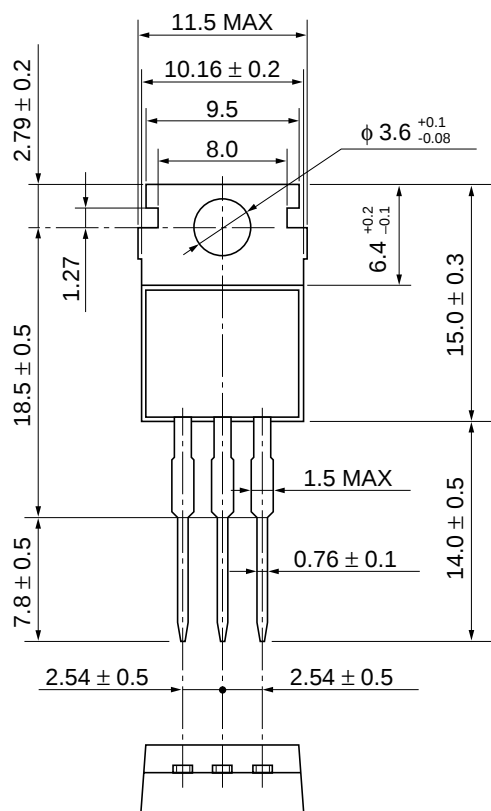


Forward Transfer Admittance vs. Frequency



Package Dimensions

As of January, 2001
Unit: mm



Hitachi Code	TO-220AB
JEDEC	Conforms
EIAJ	Conforms
Mass (reference value)	1.8 g

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