

2SK213, 2SK214, 2SK215, 2SK216

Silicon N-Channel MOS FET

HITACHI

ADE-208-1241 (Z)

1st. Edition

Mar. 2001

Application

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

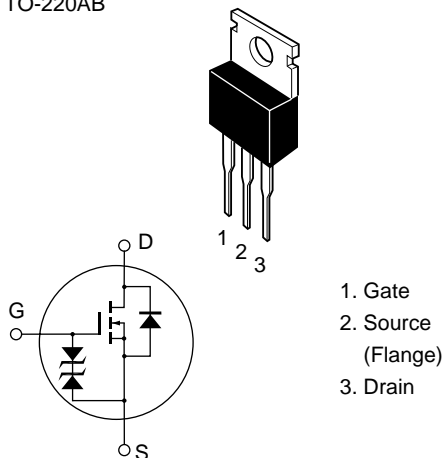
Complementary pair with 2SJ76, J77, J78, J79

Features

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

Outline

TO-220AB



2SK213, 2SK214, 2SK215, 2SK216

Absolute Maximum Ratings (Ta = 25°C)

Item		Symbol	Ratings	Unit
Drain to source voltage	2SK213	V_{DSX}	140	V
	2SK214		160	
	2SK215		180	
	2SK216		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

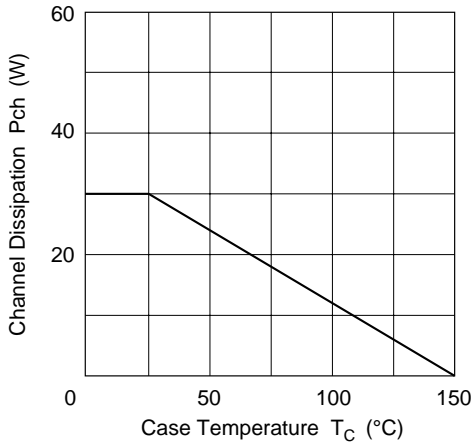
Note: 1. Value at T_c = 25°C

Electrical Characteristics (Ta = 25°C)

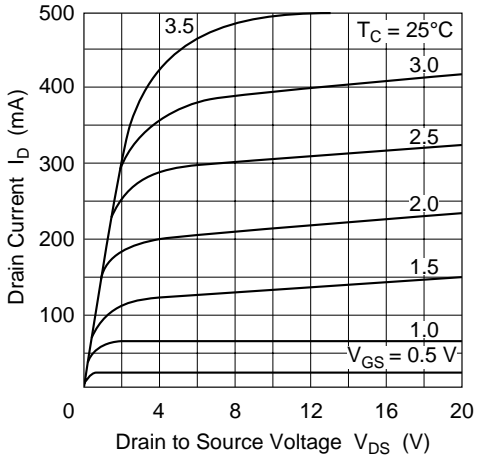
Item		Symbol	Min	Typ	Max	Unit	Test conditions
Drain to source breakdown voltage	2SK213	$V_{(BR)DSX}$	140	—	—	V	$I_D = 1 \text{ mA}$, $V_{GS} = -2 \text{ V}$
	2SK214		160	—	—	V	
	2SK215		180	—	—	V	
	2SK216		200	—	—	V	
Gate to source breakdown voltage		$V_{(BR)GSS}$	±15	—	—	V	$I_G = \pm 10 \text{ } \mu\text{A}$, $V_{DS} = 0$
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	40	—	mS	$I_D = 10 \text{ mA}$, $V_{DS} = 20 \text{ V}$ * ¹
Input capacitance		Ciss	—	90	—	pF	$I_D = 10 \text{ mA}$, $V_{DS} = 10 \text{ V}$, $f = 1 \text{ MHz}$
Reverse transfer capacitance		Crss	—	2.2	—	pF	

Note: 1. Pulse test

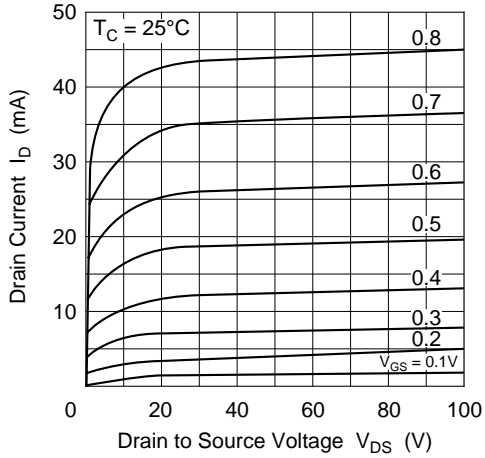
Power vs. Temperature Derating



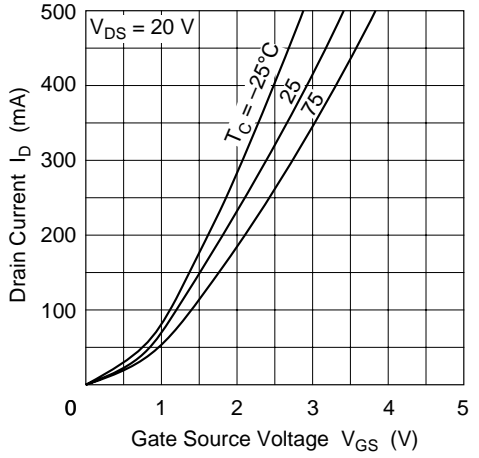
Typical Output Characteristics

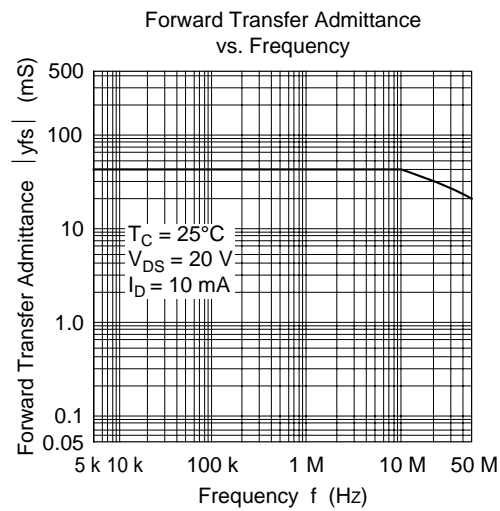
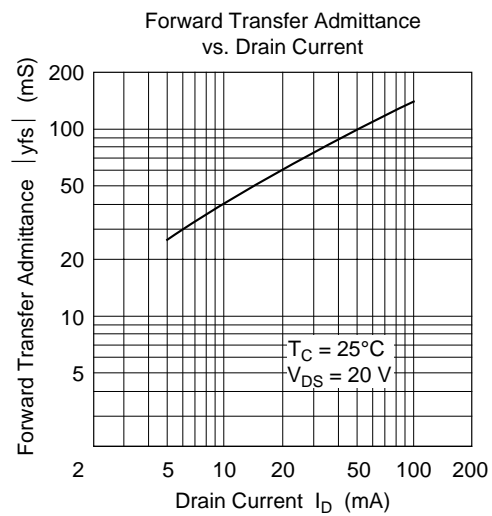
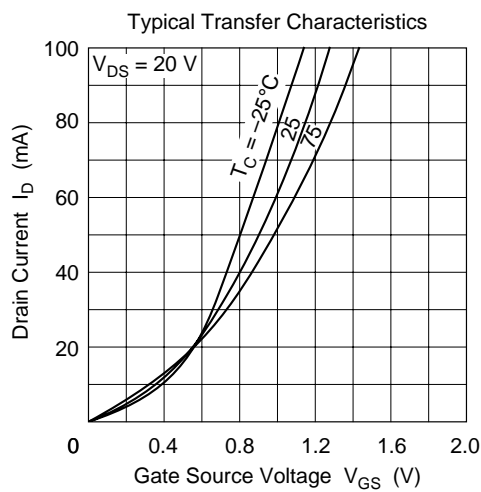


Typical Output Characteristics



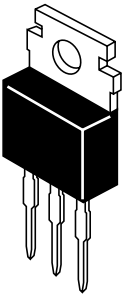
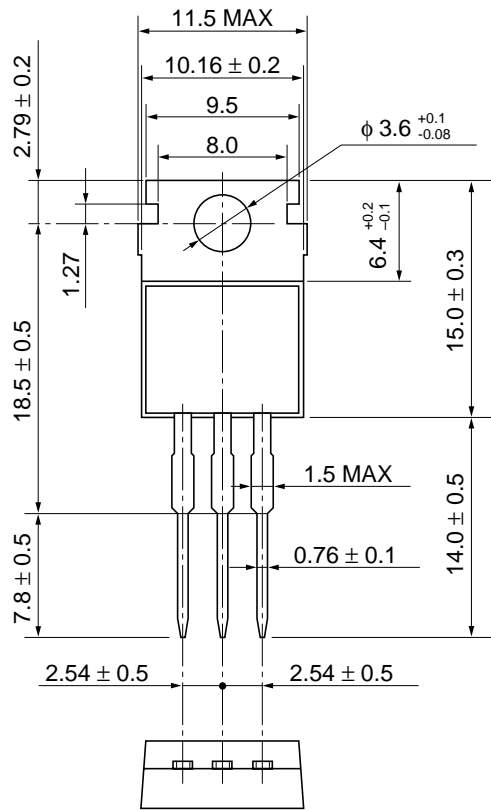
Typical Transfer Characteristics





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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