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.

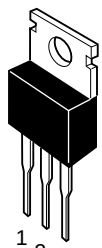
Complementary pair with 2SJ76, J77, J78, J79

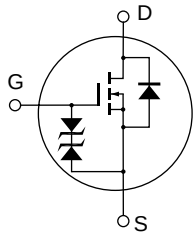
Features

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

Outline

TO-220AB





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

Hitachi semiconductor

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

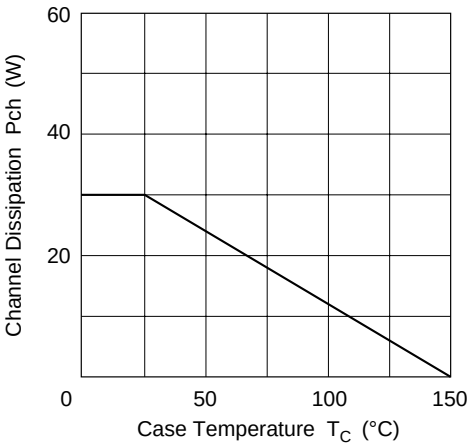
Note: 1. Value at T_C = 25°C

Electrical Characteristics (Ta = 25°C)

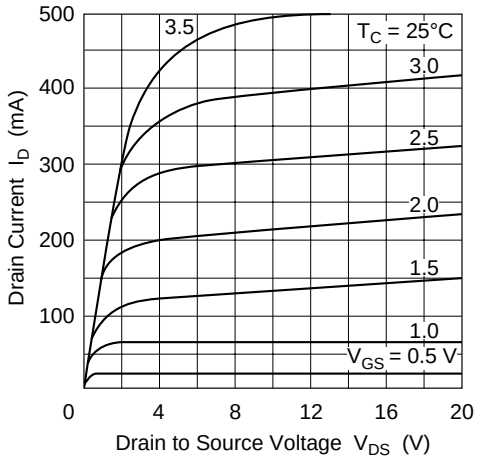
Item		Symbol	Min	Typ	Max	Unit	Test conditions
Drain to source	2SK213	$V_{(BR)DSX}$	140	—	—	V	I_D = 1 mA, V_{GS} = –2 V
breakdown voltage	2SK214		160	—	—	V	
	2SK215		180	—	—	V	
	2SK216		200	—	—	V	
Gate to source breakdown voltag		$V_{(BR)GSS}$	±15	—	—	V	I_G = ±10 µA, V_{DS} = 0
Gate to source voltage		$V_{GS(on)}$	0.2	—	1.5	V	I_D = 10 mA, V_{DS} = 10 V *[1]
Drain to source saturation voltage		$V_{DS(sat)}$	—	—	2.0	V	I_D = 10 mA, V_{GD} = 0 *[1]
Forward transfer admittance		$\|y_{fs}\|$	20	40	—	mS	I_D = 10 mA, V_{DS} = 20 V *[1]
Input capacitance		Ciss	—	90	—	pF	I_D = 10 mA, V_{DS} = 10 V,
Reverse transfer capacitance		Crss	—	2.2	—	pF	f = 1 MHz

Note: 1. Pulse test

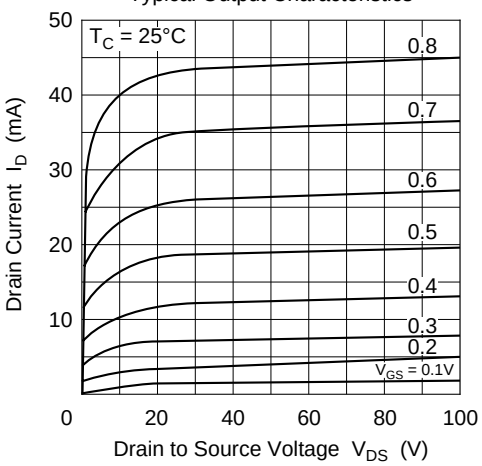
Power vs. Temperature Derating



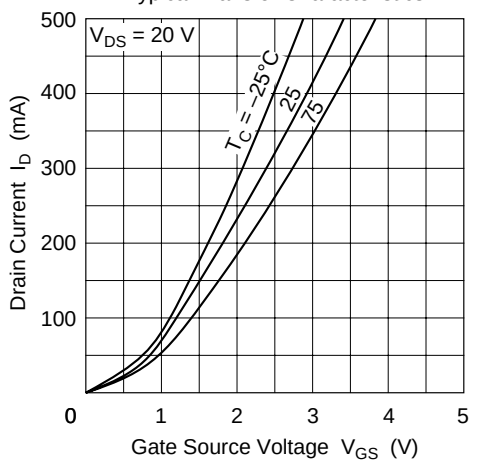
Typical Output Characteristics



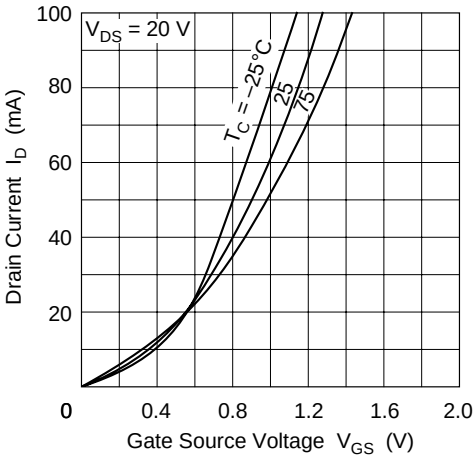
Typical Output Characteristics



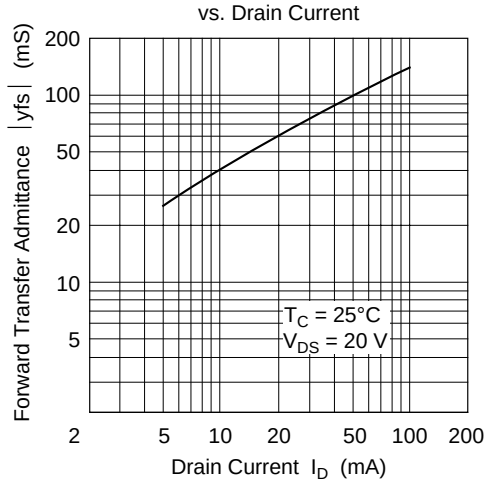
Typical Transfer Characteristics



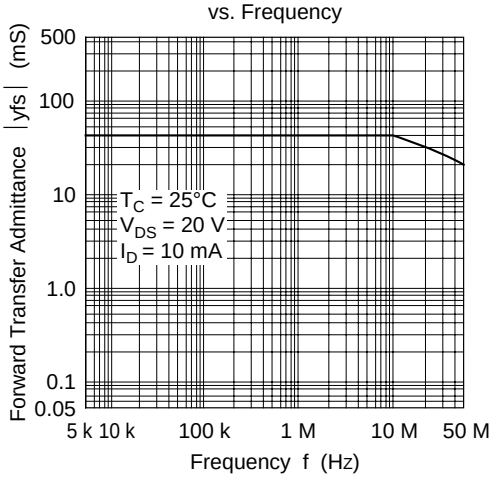
Typical Transfer Characteristics



Forward Transfer Admittance vs. Drain Current

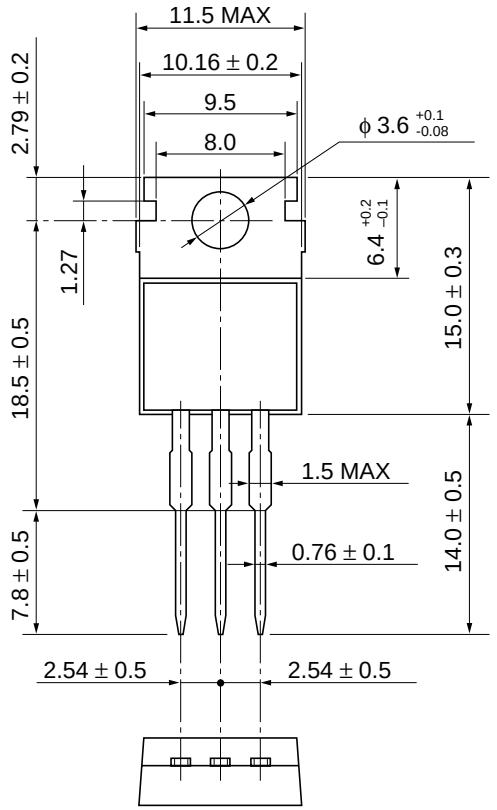


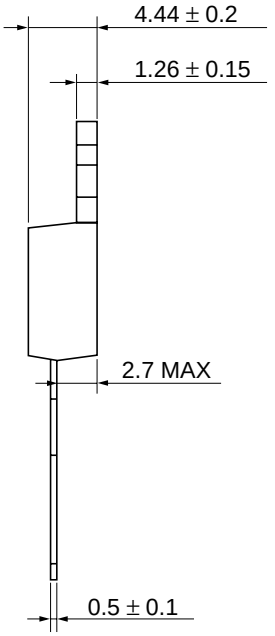
Forward Transfer Admittance vs. Frequency

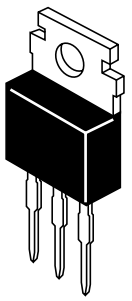


Package Dimensions

As of January, 2001
Unit: mm







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

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