2SK213, 2SK214, 2SK215, 2SK216

Silicon N Channel MOS FET

REJ03G0903-0200
(Previous: ADE-208-1241)
Rev.2.00
Sep 07, 2005

Application

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

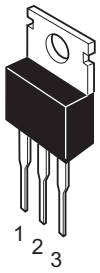
Complementary pair with 2SJ76, J77, J78, J79

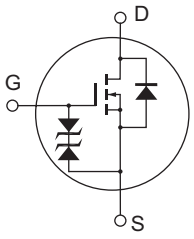
Features

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

Outline

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





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

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

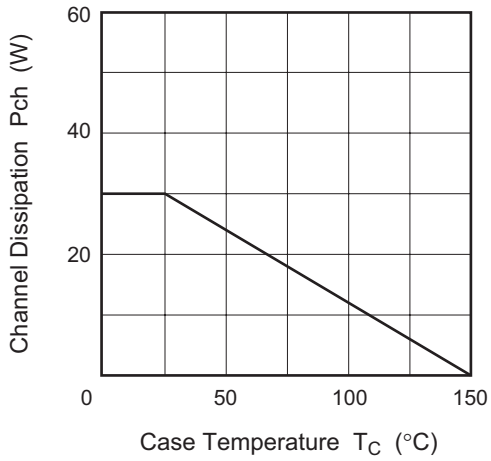
(Ta = 25°C)

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

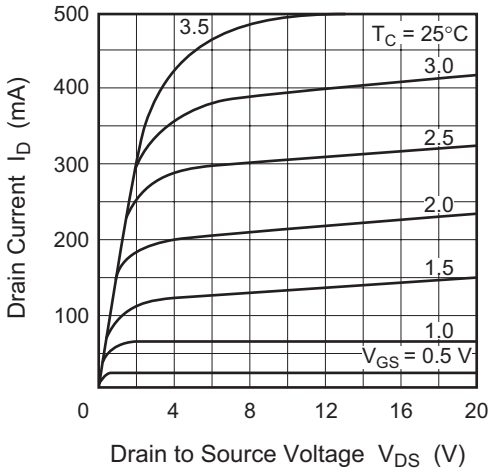
Note: 2. Pulse test

Main Characteristics

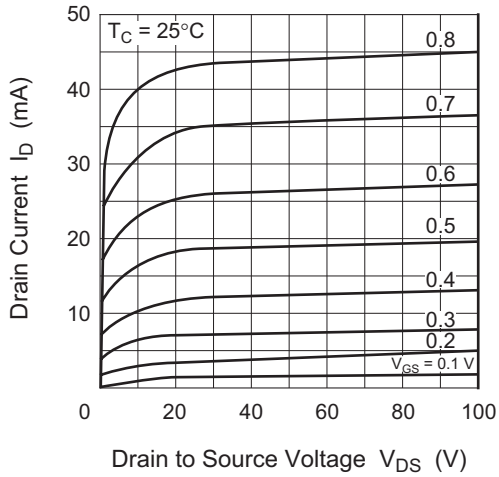
Power vs. Temperature Derating



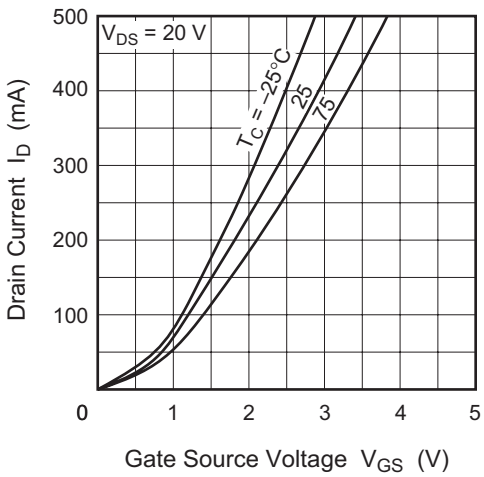
Typical Output Characteristics



Typical Output Characteristics



Typical Transfer Characteristics



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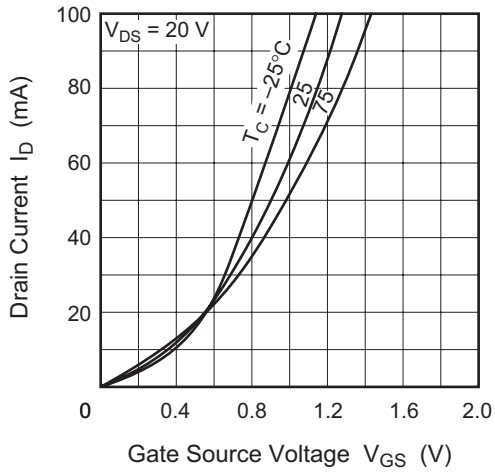
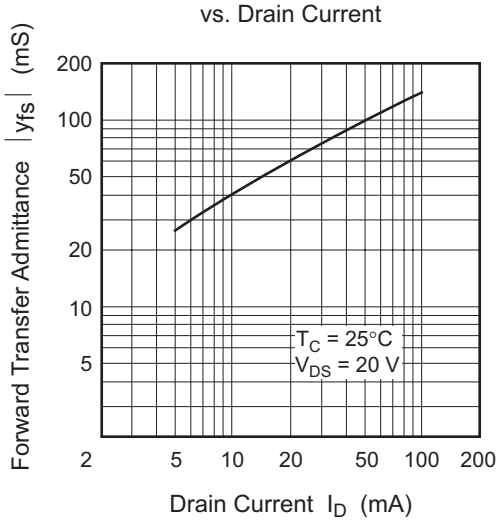
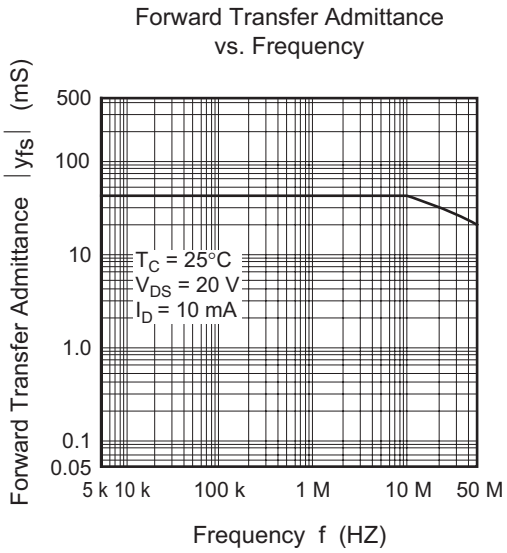


Forward Transfer Admittance vs. Drain Current

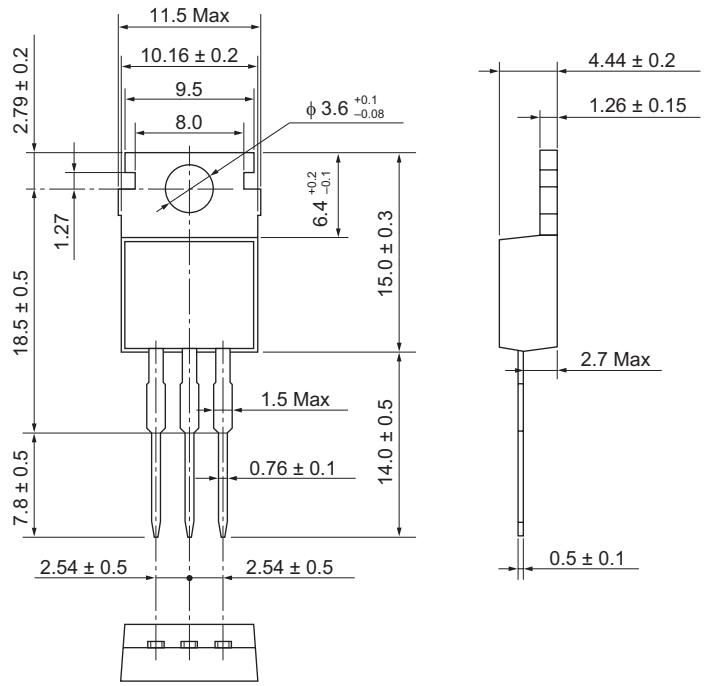



Forward Transfer Admittance
vs. Frequency
Forward Transfer Admittance |yfs| (mS)
500
100
10
1.0
0.1
0.05
T_C = 25°C
V_{DS} = 20 V
I_D = 10 mA
5 k 10 k
100 k
1 M
10 M
50 M
Frequency f (HZ)

Package Dimensions

JEITA Package Code	RENESAS Code	Package Name	MASS[Typ.]
SC-46	PRSS0004AC-A	TO-220AB / TO-220ABV	1.8g

Unit: mm



Ordering Information

Part Name	Quantity	Shipping Container
2SK213-E	500 pcs	Box (Sack)
2SK214-E	500 pcs	Box (Sack)
2SK215-E	500 pcs	Box (Sack)
2SK216-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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http://www.renesas.com

Refer to "**http://www.renesas.com/en/network**" for the latest and detailed information.

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