

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.

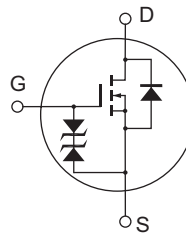
Complementary pair with 2SJ76, J77, J78, J79

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

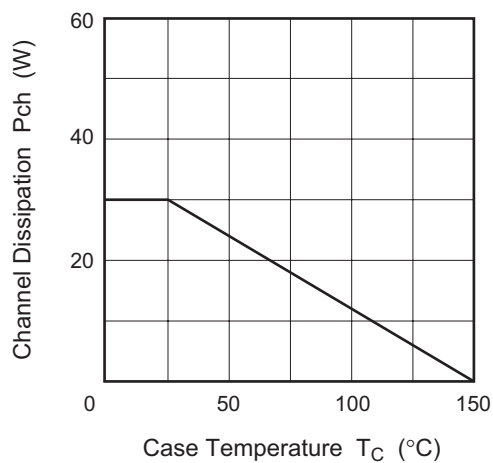
(Ta = 25°C)

Item		Symbol	Min	Typ	Max	Unit	Test conditions
Drain to source breakdown voltage	2SK213	$V_{(BR)DSX}$	140	—	—	V	$I_D = 1 \text{ mA}$, $V_{GS} = -2 \text{ V}$
	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	$I_D = 10 \text{ mA}$, $V_{DS} = 10 \text{ V}$ * ²
Drain to source saturation voltage		$V_{DS(sat)}$	—	—	2.0	V	$I_D = 10 \text{ mA}$, $V_{GD} = 0$ * ²
Forward transfer admittance		$ y_{fs} $	20	40	—	mS	$I_D = 10 \text{ mA}$, $V_{DS} = 20 \text{ V}$ * ²
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	

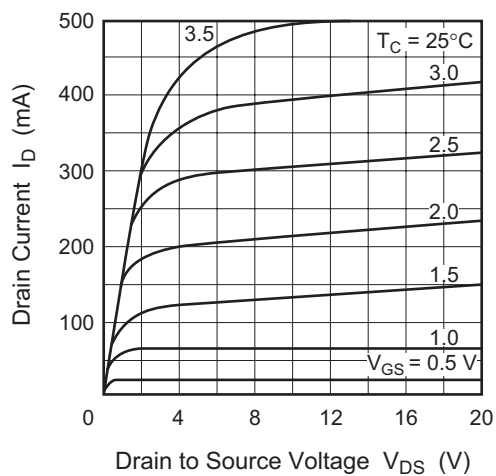
Note: 2. Pulse test

Main Characteristics

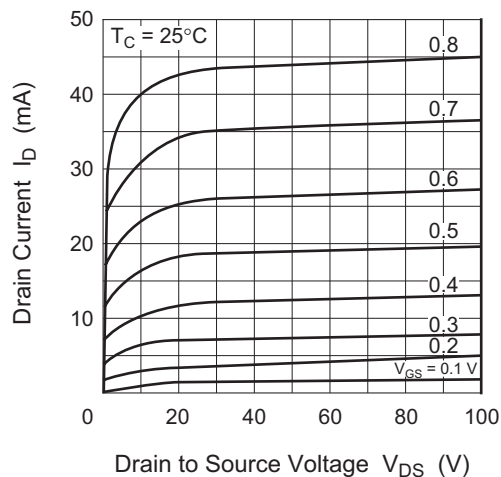
Power vs. Temperature Derating



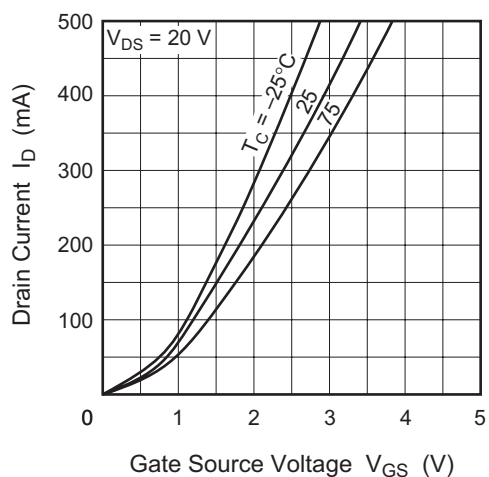
Typical Output Characteristics



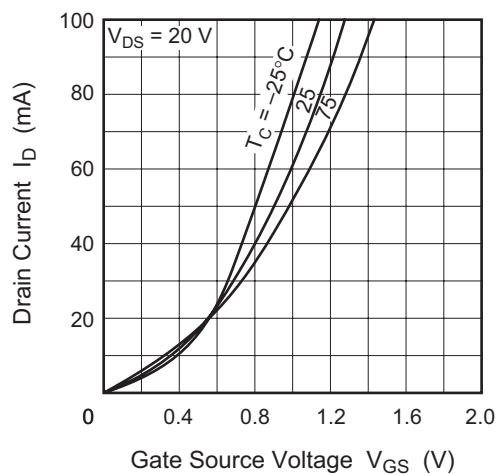
Typical Output Characteristics



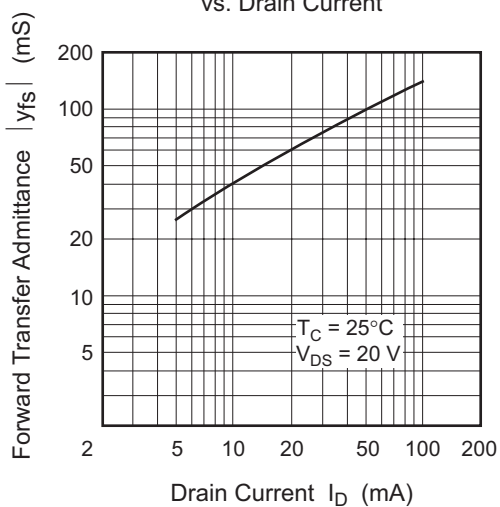
Typical Transfer Characteristics

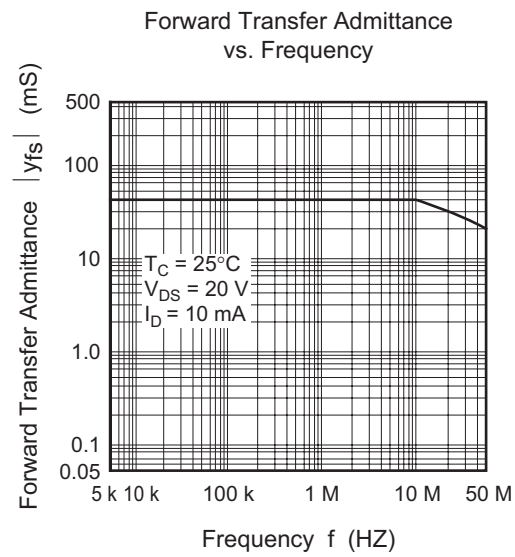


Typical Transfer Characteristics

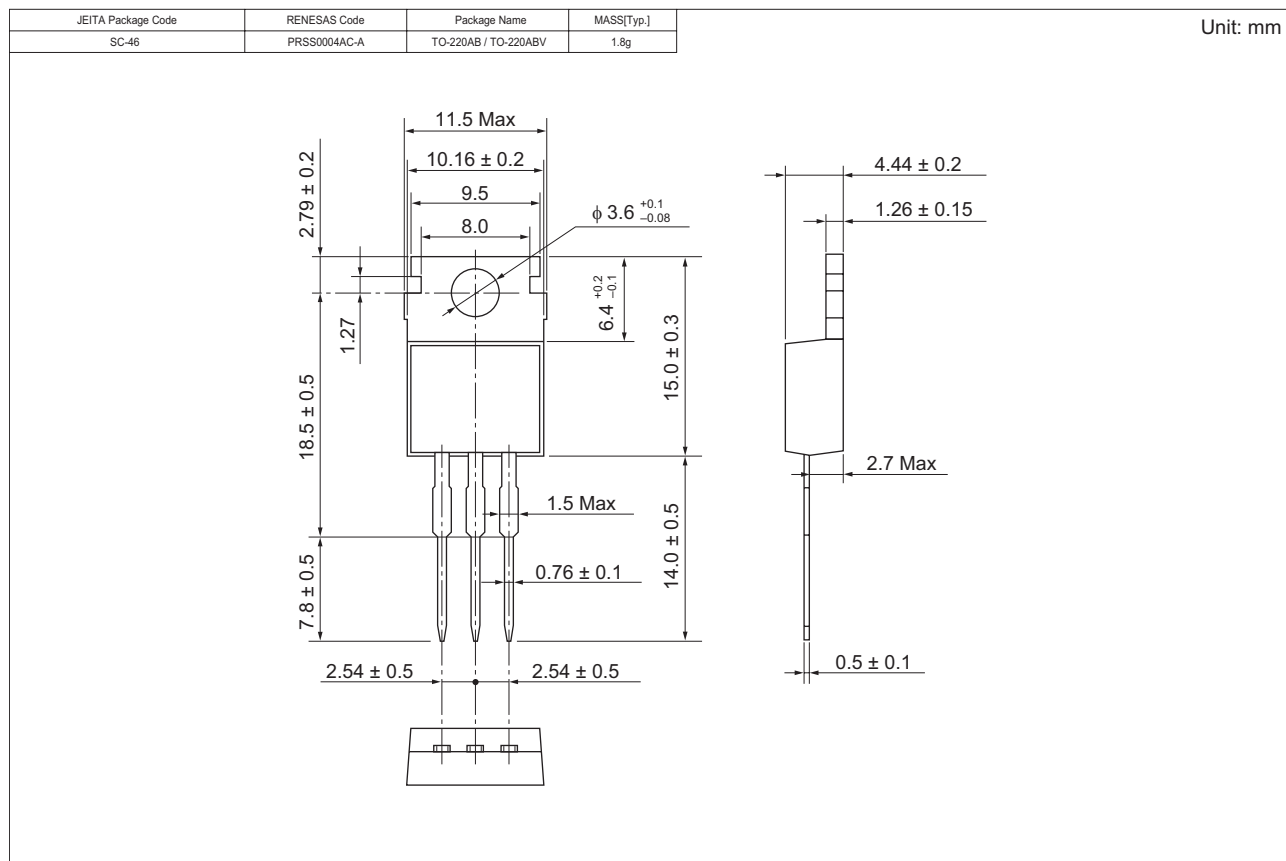


Forward Transfer Admittance vs. Drain Current





Package Dimensions



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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