

2SK1070

Silicon N-Channel Junction FET

R07DS0282EJ0400

Rev.4.00

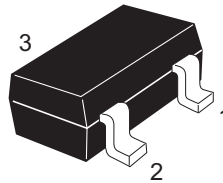
Jan 10, 2014

Application

- Low frequency / High frequency amplifier

Outline

RENESAS Package code: PLSP0003ZB-A
(Package name: MPAK)



1. Drain
2. Source
3. Gate

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Gate to drain voltage	V_{GDO}	-22	V
Gate to source voltage	V_{GSO}	-22	V
Drain current	I_D	50	mA
Gate current	I_G	10	mA
Channel power dissipation	P_{ch}	150	mW
Channel temperature	T_{ch}	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

Electrical Characteristics

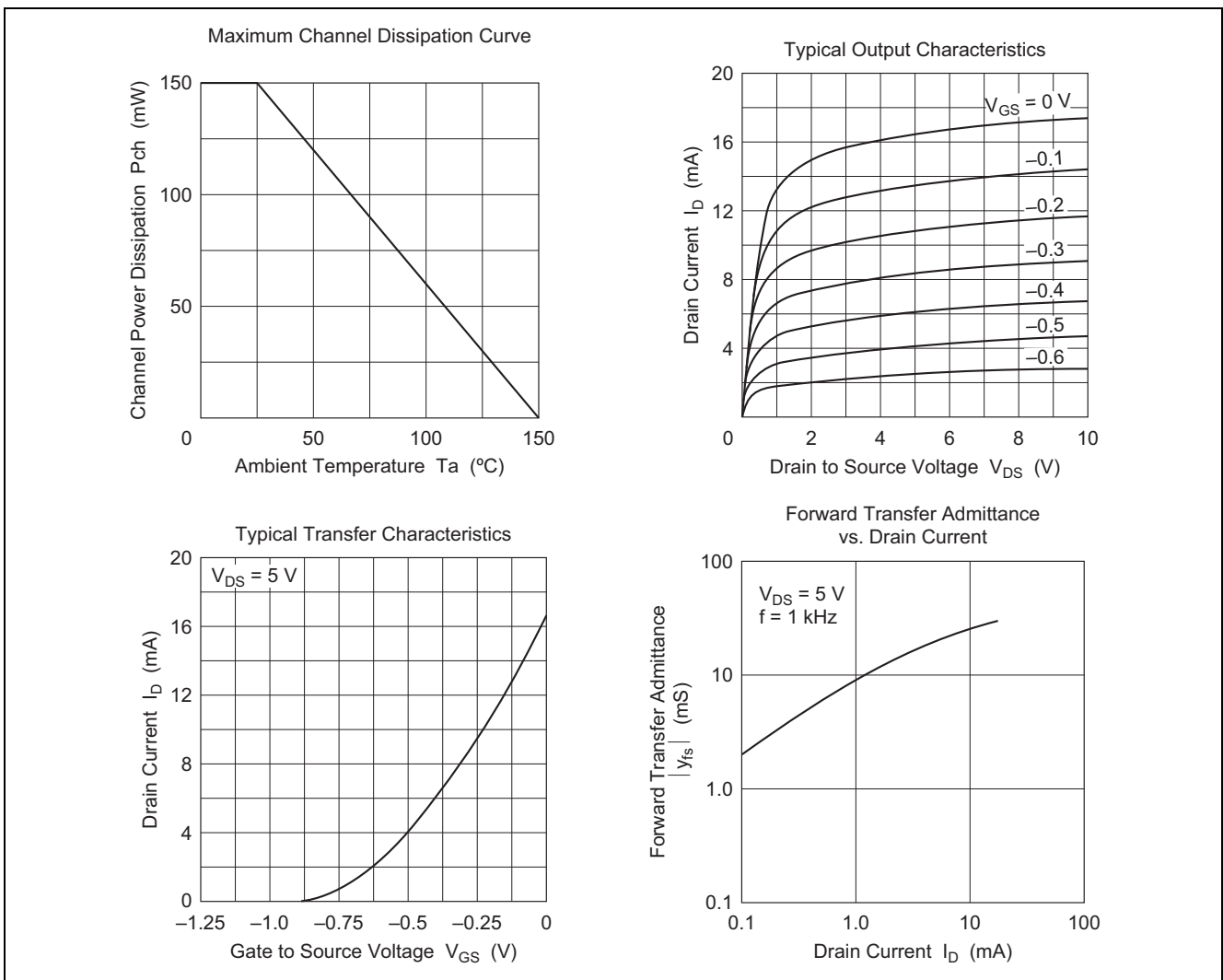
(Ta = 25°C)

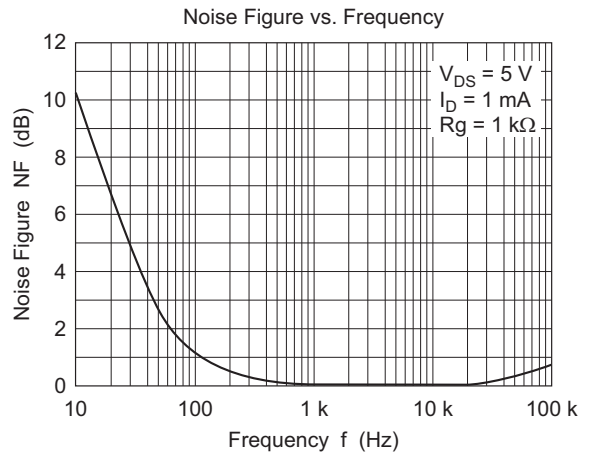
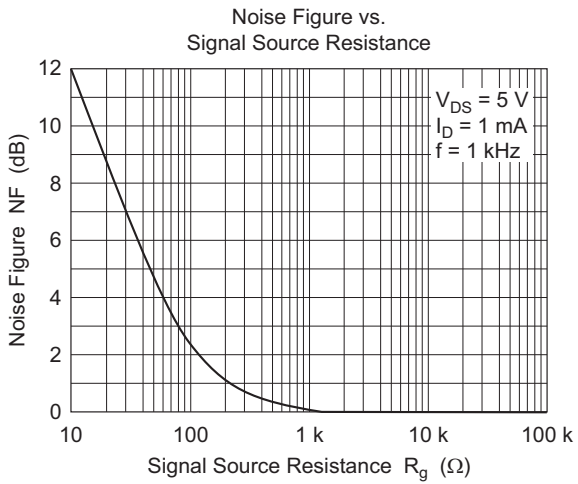
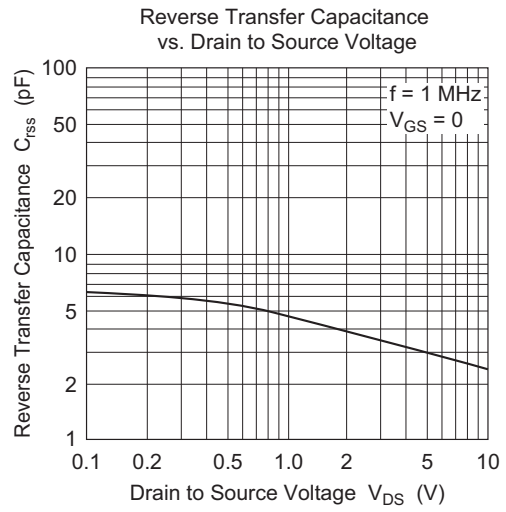
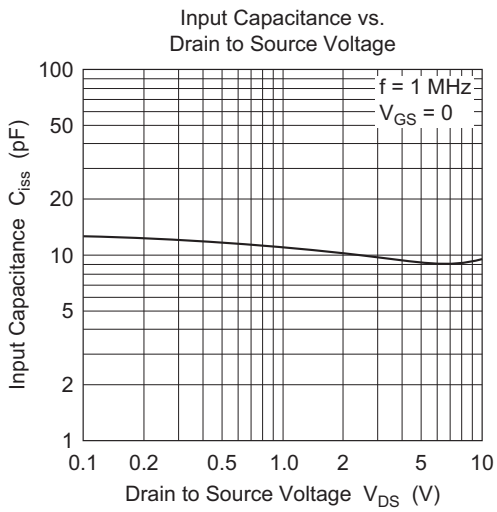
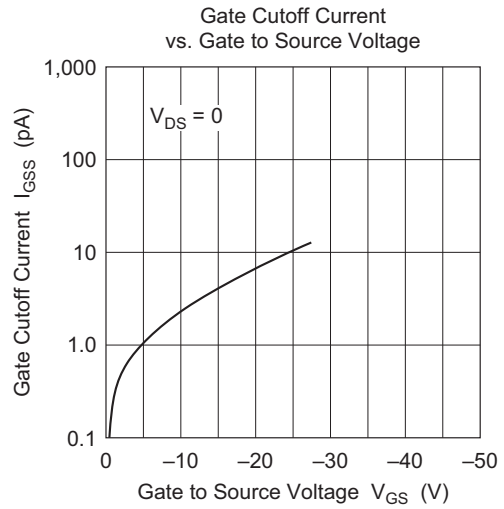
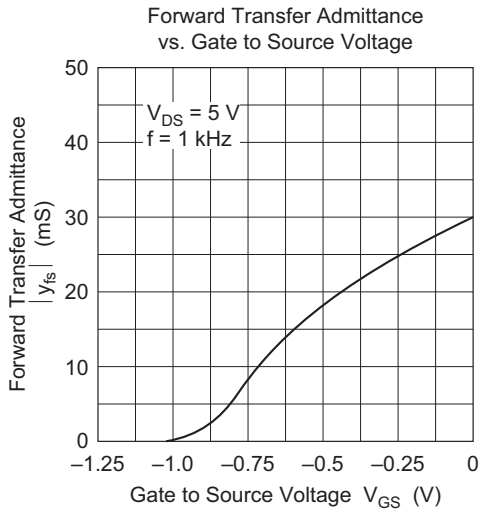
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Gate cutoff current	I_{GSS}	—	—	-10	nA	$V_{GS} = -15\text{ V}, V_{DS} = 0$
Gate to source breakdown voltage	$V_{(BR)GSS}$	-22	—	—	V	$I_G = -10\ \mu\text{A}, V_{DS} = 0$
Drain current	I_{DSS}^{*1}	12	—	40	mA	$V_{DS} = 5\text{ V}, V_{GS} = 0$, Pulse test
Gate to source cutoff voltage	$V_{GS(off)}$	0	—	-2.5	V	$V_{DS} = 5\text{ V}, I_D = 10\ \mu\text{A}$
Forward transfer admittance	$ y_{fs} $	20	30	—	mS	$V_{DS} = 5\text{ V}, V_{GS} = 0, f = 1\text{ kHz}$
Input capacitance	C_{iss}	—	9	—	pF	$V_{DS} = 5\text{ V}, V_{GS} = 0, f = 1\text{ MHz}$

Notes: 1. The 2SK1070 is grouped by I_{DSS} as follows.

Grade	C	D	E
Mark	PIC	PID	PIE
I_{DSS}	12 to 22	18 to 30	27 to 40

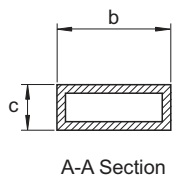
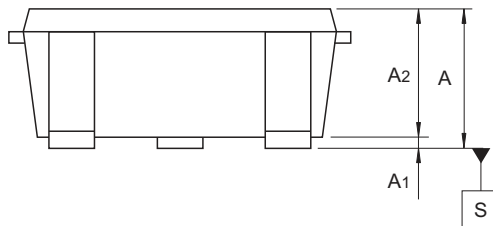
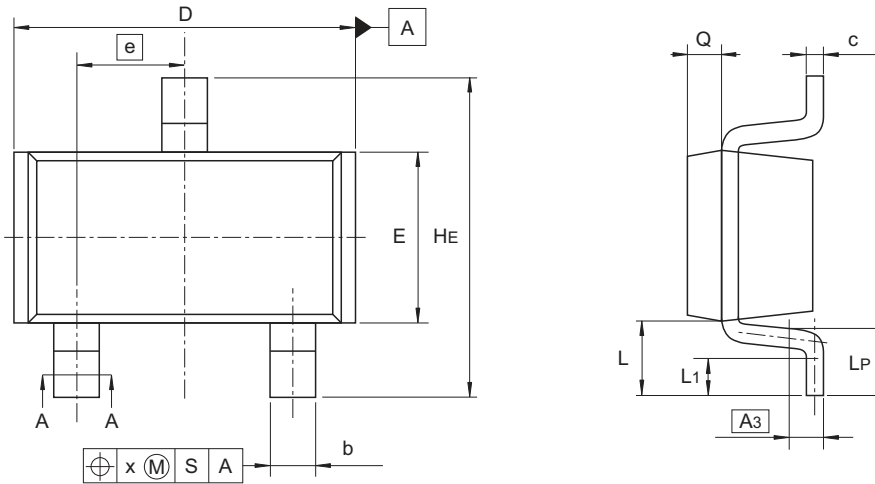
Main Characteristics





Package Dimensions

JEITA Package Code	RENESAS Code	Previous Code	MASS (Typ) [g]
SC-59A	PLSP0003ZB-A	MPAK(T) / MPAK(T)V	0.011



Reference Symbol	Dimensions in millimeters		
	Min	Nom	Max
A	1.0	—	1.3
A1	0	—	0.1
A2	1.0	1.1	1.2
A3	—	0.25	—
b	0.35	0.4	0.5
c	0.1	0.16	0.26
D	2.7	—	3.1
E	1.35	1.5	1.65
e	—	0.95	—
HE	2.2	2.8	3.0
L	0.35	—	0.75
L1	0.15	—	0.55
LP	0.25	—	0.65
x	—	—	0.05
Q	—	0.3	—

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Ordering Information

Orderable Part Number	Quantity	Shipping Container
2SK1070PICTL-E 2SK1070PIDTL-E 2SK1070PIETL-E 2SK1070PICTL-H 2SK1070PIDTL-H 2SK1070PIETL-H	3000	φ178 mm reel, 8 mm Emboss Taping

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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Renesas Electronics America Inc.
2880 Scott Boulevard Santa Clara, CA 95050-2554, U.S.A.
Tel: +1-408-586-6000, Fax: +1-408-588-6130

Renesas Electronics Canada Limited
1101 Nicholson Road, Newmarket, Ontario L3Y 9C3, Canada
Tel: +1-905-898-5441, Fax: +1-905-898-3220

Renesas Electronics Europe Limited
Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K.
Tel: +44-1628-651-700, Fax: +44-1628-651-804

Renesas Electronics Europe GmbH
Arcadiastrasse 10, 40472 Düsseldorf, Germany
Tel: +49-211-65030, Fax: +49-211-6503-1327

Renesas Electronics (China) Co., Ltd.
7th Floor, Quantum Plaza, No.27 ZhiChunLu Haidian District, Beijing 100083, P.R.China
Tel: +86-10-8235-1155, Fax: +86-10-8235-7679

Renesas Electronics (Shanghai) Co., Ltd.
Unit 301, Tower A, Central Towers, 555 LanGao Rd., Putuo District, Shanghai, China
Tel: +86-21-2226-0888, Fax: +86-21-2226-0999

Renesas Electronics Hong Kong Limited
Unit 1601-1613, 16/F., Tower 2, Grand Century Place, 193 Prince Edward Road West, Mongkok, Kowloon, Hong Kong
Tel: +852-2886-9318, Fax: +852 2886-9022/9044

Renesas Electronics Taiwan Co., Ltd.
13F, No. 363, Fu Shing North Road, Taipei, Taiwan
Tel: +886-2-8175-9600, Fax: +886 2-8175-9670

Renesas Electronics Singapore Pte. Ltd.
80 Bendemeer Road, Unit #06-02 Hyflux Innovation Centre Singapore 339949
Tel: +65-6213-0200, Fax: +65-6213-0300

Renesas Electronics Malaysia Sdn.Bhd.
Unit 906, Block B, Menara Amcorp, Amcorp Trade Centre, No. 18, Jin Persiaran Barat, 46050 Petaling Jaya, Selangor Darul Ehsan, Malaysia
Tel: +60-3-7955-9390, Fax: +60-3-7955-9510

Renesas Electronics Korea Co., Ltd.
12F., 234 Teheran-ro, Gangnam-Gu, Seoul, 135-080, Korea
Tel: +82-2-558-3737, Fax: +82-2-558-5141