

# 2SK1070

## Silicon N-Channel Junction FET

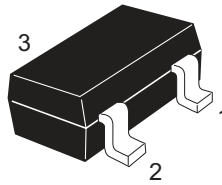
R07DS0282EJ0400  
Rev.4.00  
Jan 10, 2014

### 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

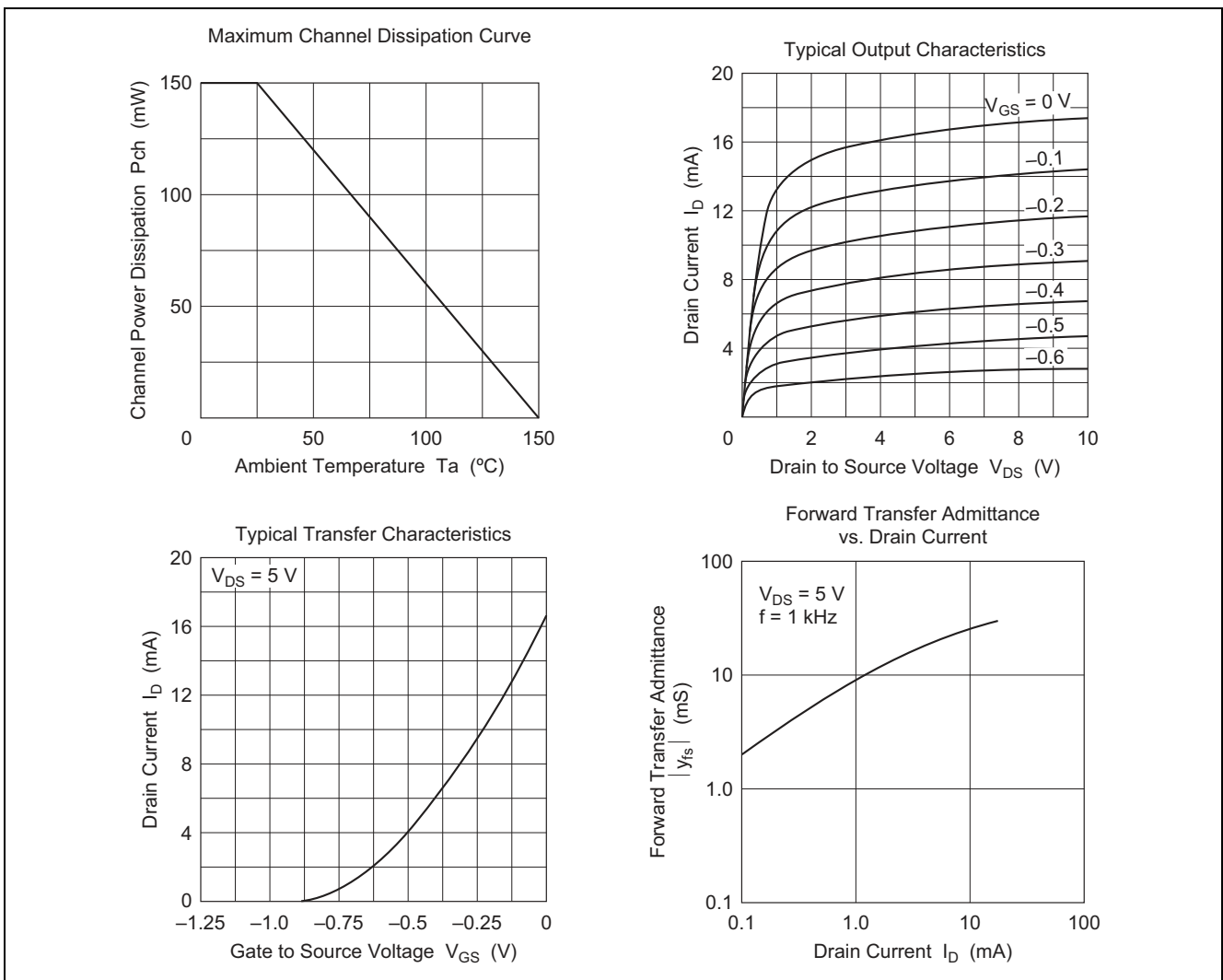
(Ta = 25°C)

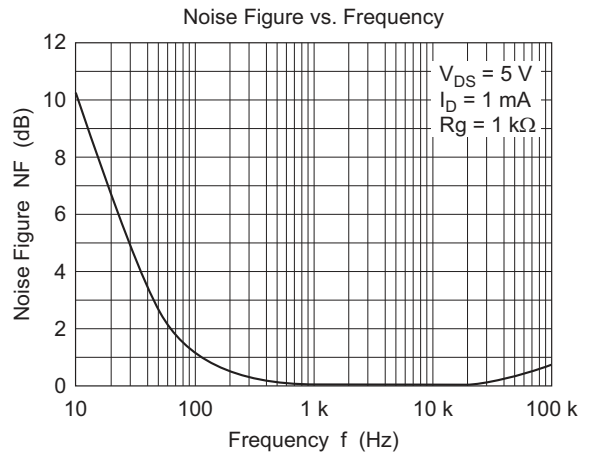
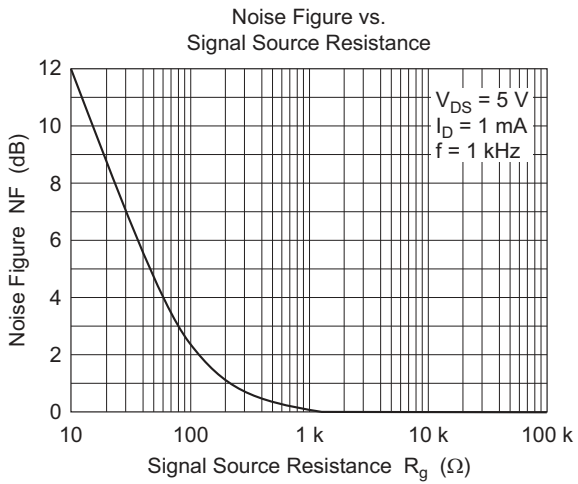
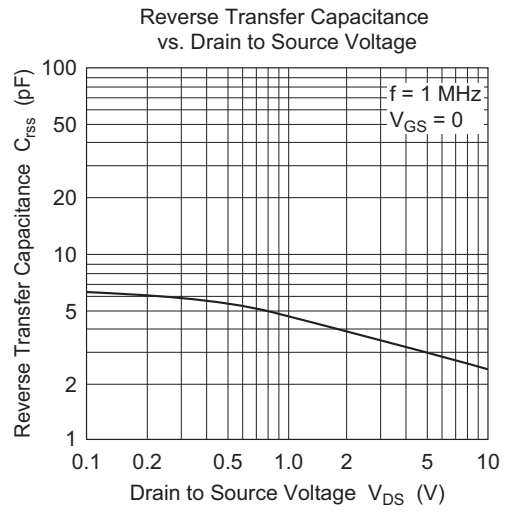
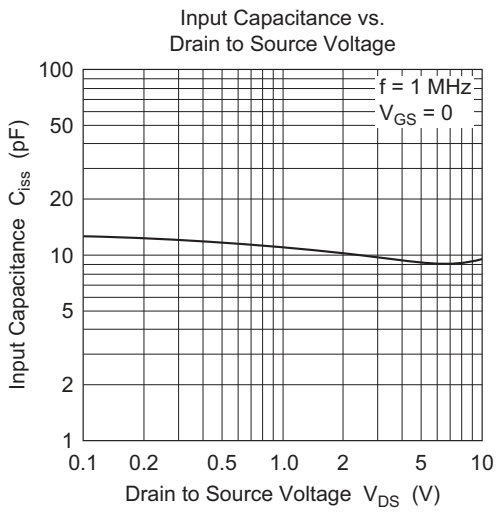
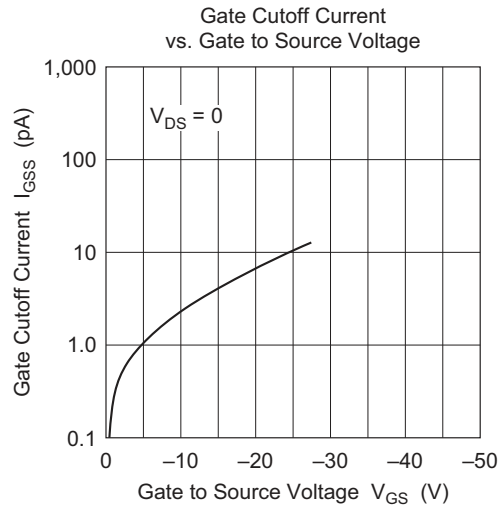
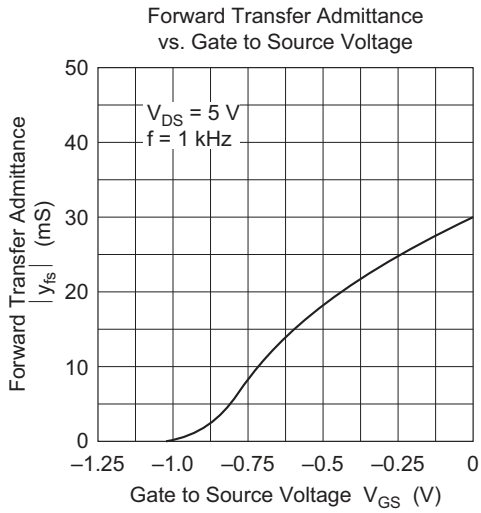
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Gate cutoff current	$I_{GSS}$	—	—	-10	nA	$V_{GS} = -15\text{ V}, V_{DS} = 0$
Gate to source breakdown voltage	$V_{(BR)GSS}$	-22	—	—	V	$I_G = -10\ \mu\text{A}, V_{DS} = 0$
Drain current	$I_{DSS}^{*1}$	12	—	40	mA	$V_{DS} = 5\text{ V}, V_{GS} = 0$ , Pulse test
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

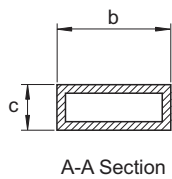
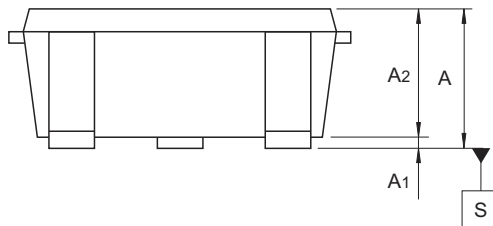
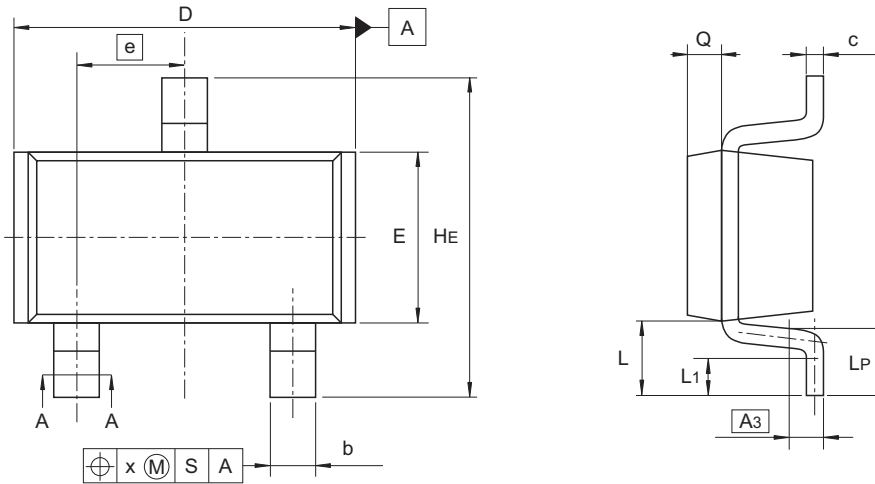
### Main Characteristics





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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