2SK360

Silicon N-Channel MOS FET

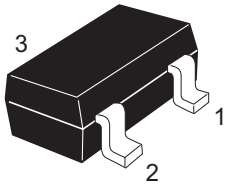
REJ03G0811-0200
(Previous ADE-208-1170)
Rev.2.00
Aug.10.2005

Application

VHF amplifier

Outline

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



1. Gate
2. Drain
3. Source

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V_{DSX}*[1]	20	V
Gate to source voltage	V_{GSS}	±5	V
Drain current	I_D	30	mA
Gate current	I_G	±1	mA
Channel power dissipation	Pch	150	mW
Channel temperature	Tch	150	°C
Storage temperature	Tstg	–55 to +150	°C

Note: 1. V_{GS} = –4 V

Electrical Characteristics

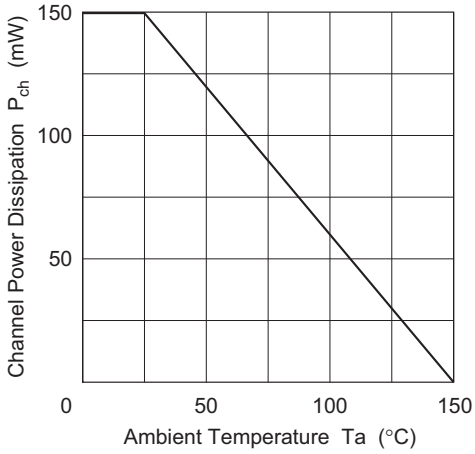
(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Drain to source breakdown voltage	$V_{(BR)DSX}$	20	—	—	V	I_D = 100 μ A, V_{GS} = –4 V
Gate cutoff current	I_{GSS}	—	—	±20	nA	V_{GS} = ±5 V, V_{DS} = 0
Drain current	I_{DSS}*[1]	6	—	12	mA	V_{DS} = 10 V, V_{GS} = 0
Gate to source cutoff voltage	$V_{GS(off)}$	0	—	–2.0	V	V_{DS} = 10 V, I_D = 10 μA
Forward transfer admittance	$\|y_{fs}\|$	8	14	—	mS	V_{DS} = 10 V, V_{GS} = 0, f = 1 kHz
Input capacitance	Ciss	—	2.5	—	pF	V_{DS} = 10 V, V_{GS} = 0, f = 1 MHz
Output capacitance	Coss	—	1.6	—	pF	
Reverse transfer capacitance	Crss	—	0.03	—	pF	
Power gain	PG	—	30	—	dB	V_{DS} = 10 V, V_{GS} = 0, f = 100 MHz
Noise figure	NF	—	2.0	—	dB	

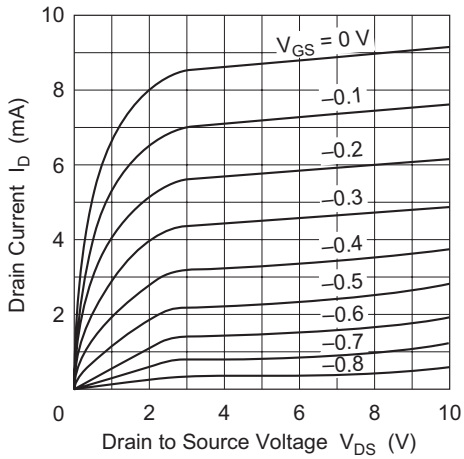
Note: 1. The 2SK360 is grouped by I_{DSS} as follows.

Grade	E	F
Mark	IGE	IGF
I_{DSS}	6 to 10	8 to 12

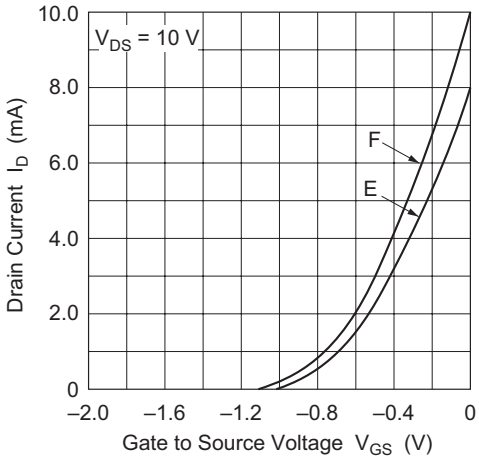
Maximum Channel Dissipation Curve



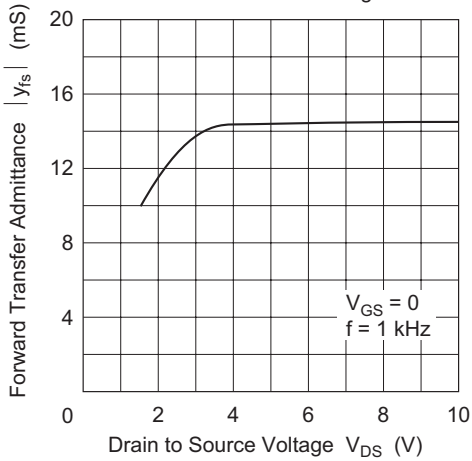
Typical Output Characteristics



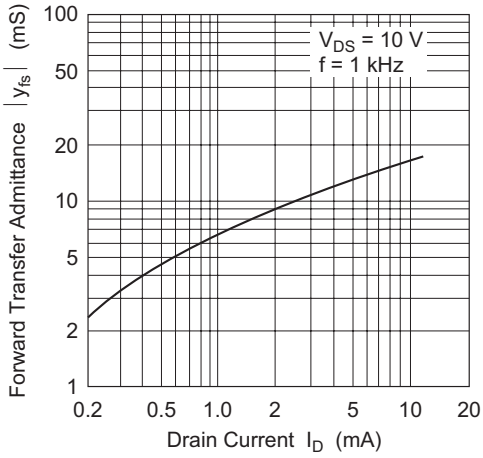
Typical Transfer Characteristics



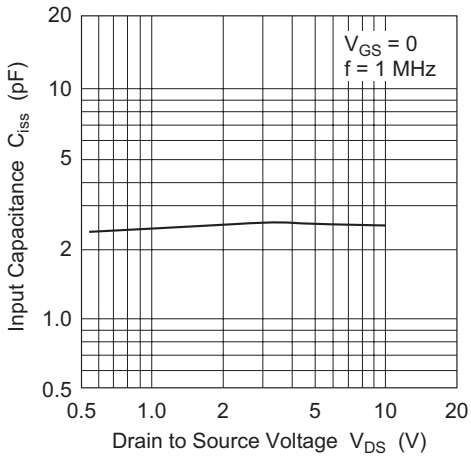
Forward Transfer Admittance vs.
Drain to Source Voltage



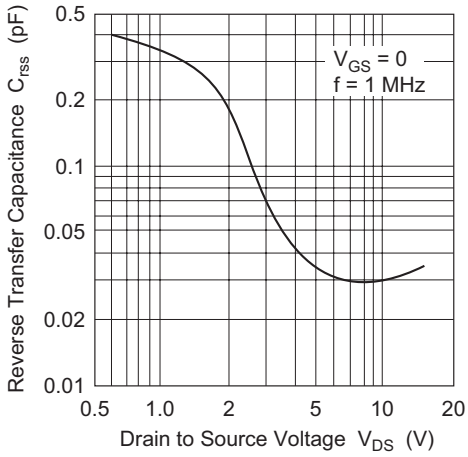
Forward Transfer Admittance vs.
Drain Current



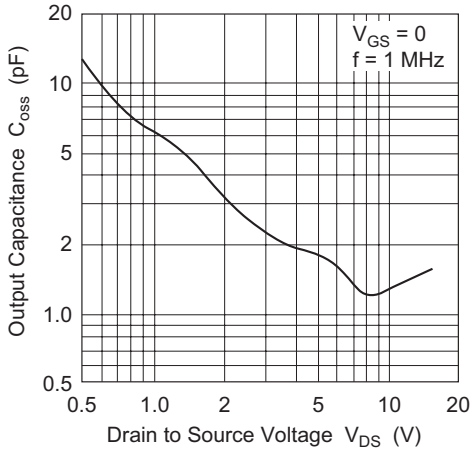
Input Capacitance vs.
Drain to Source Voltage



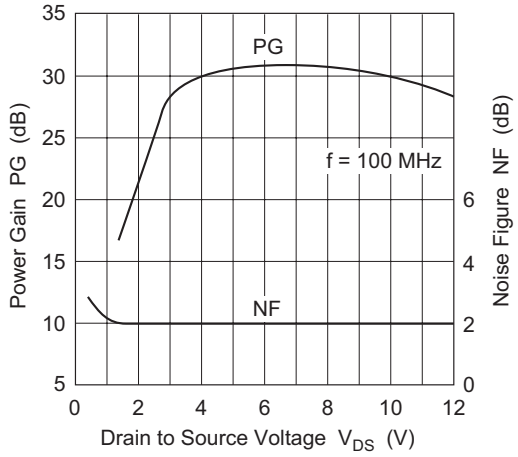
Reverse Transfer Capacitance vs. Drain to Source Voltage



Output Capacitance vs. Drain to Source Voltage

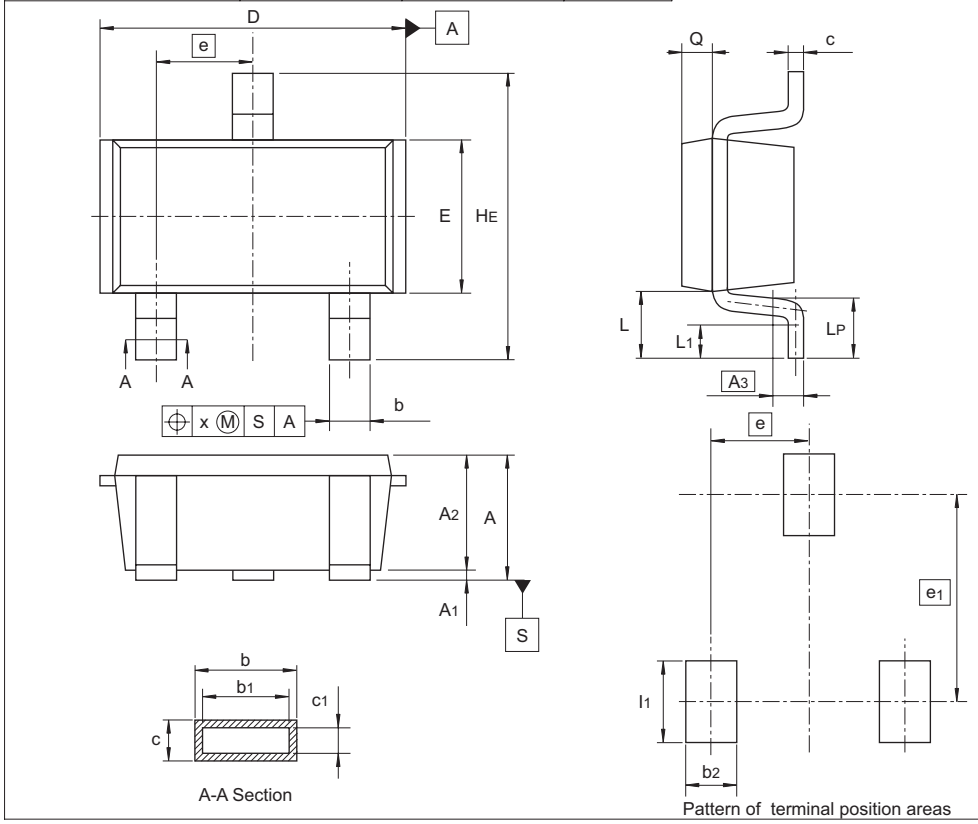


Power Gain, Noise Figure vs. Drain to Source Voltage



Package Dimensions

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



Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A	1.0	–	1.3
A_1	0	–	0.1
A_2	1.0	1.1	1.2
A_3	–	0.25	–
b	0.35	0.42	0.5
b_1	–	0.4	–
c	0.1	0.13	0.15
c_1	–	0.11	–
D	2.7	–	3.1
E	1.35	1.5	1.65
e	–	0.95	–
H_E	2.2	2.8	3.0
L	0.35	–	0.75
L_1	0.15	–	0.55
L_P	0.25	–	0.65
x	–	–	0.05
b_2	–	–	0.55
e_1	–	1.95	–
l_1	–	–	1.05
Q	–	0.3	–

Ordering Information

Part Name	Quantity	Shipping Container
2SK360IGETL	3000	ϕ178mm Reel , 8mm Emboss Taping
2SK360IGFTL	3000	ϕ178mm Reel , 8mm 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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http://www.renesas.com

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