
2SK980

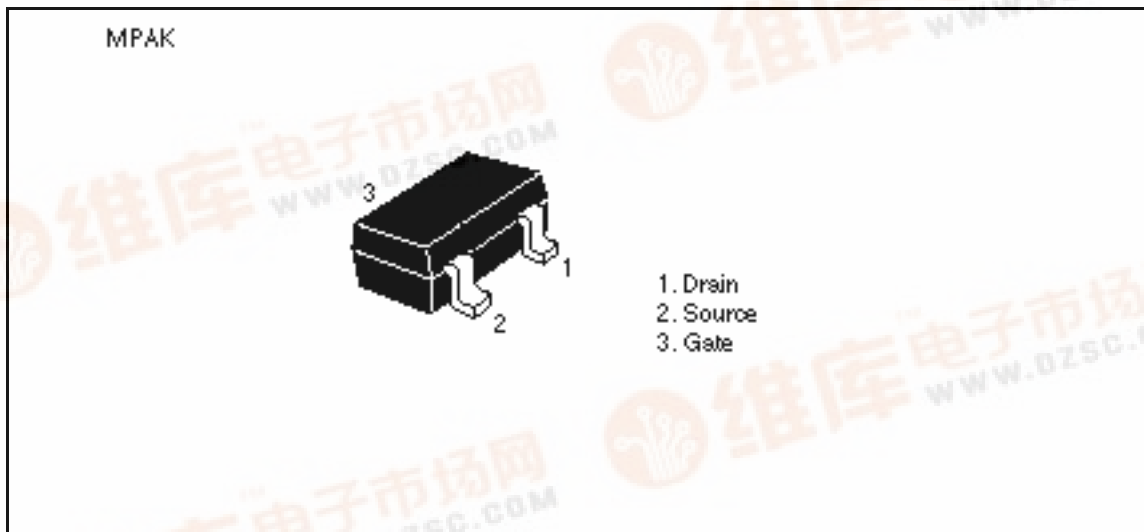
Silicon N-Channel Junction FET

HITACHI

Application

Video frequency low noise amplifier

Outline



2SK980

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V_{DSX}^{*1}	12	V
Gate to source voltage	V_{GSS}	-15	V
Drain current	I_D	40	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

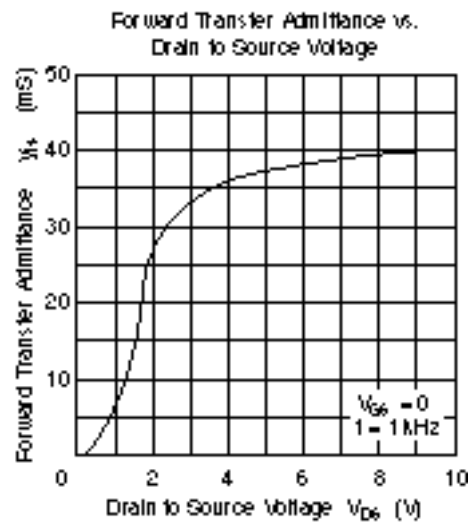
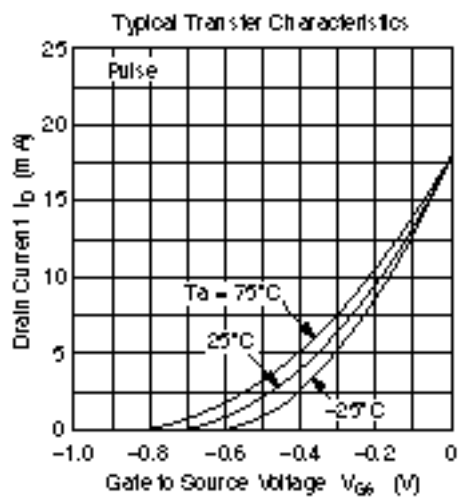
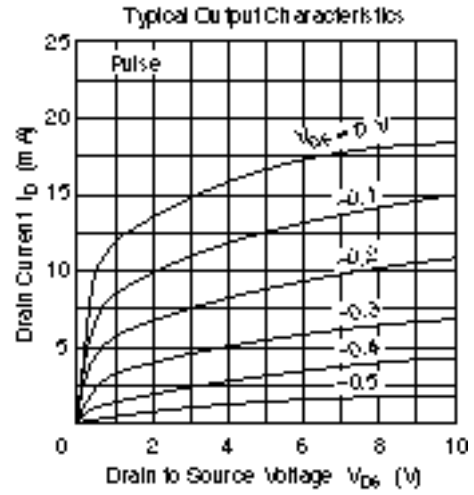
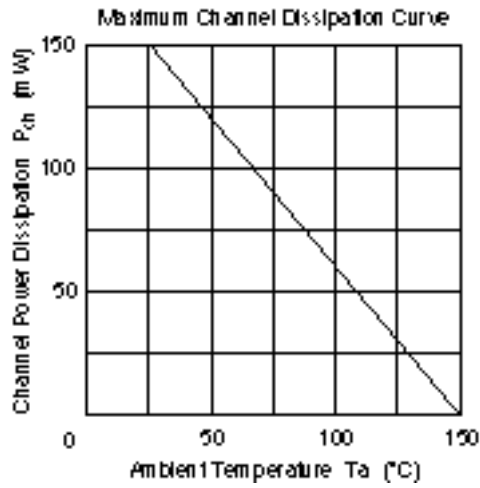
Note: 1. at $V_{GS} = -3$ V

Electrical Characteristics (Ta = 25°C)

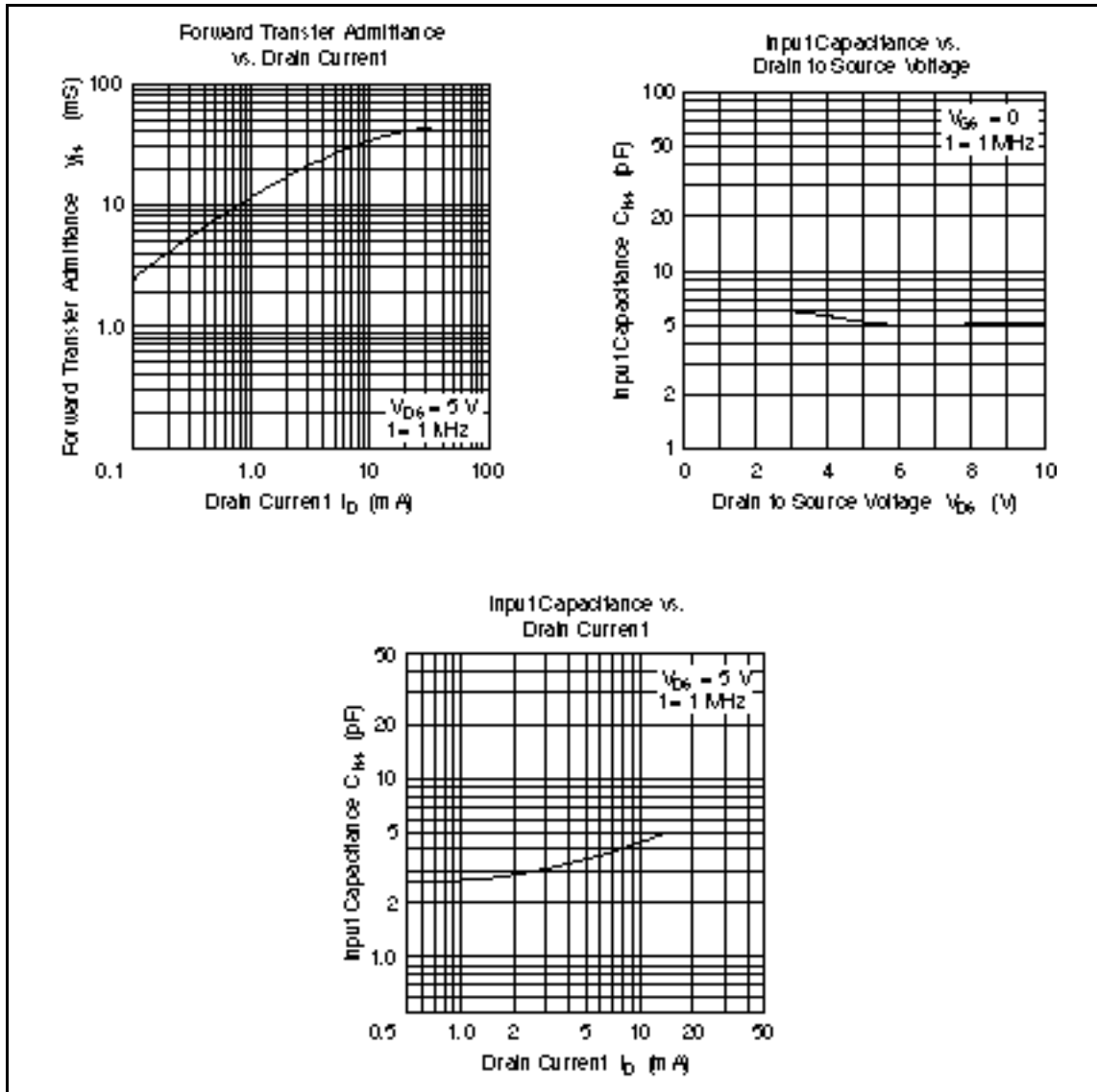
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Drain to source cutoff current	I_{DSX}	—	—	-100	μA	$V_{DS} = 12$ V, $V_{GS} = -3$ V
Gate cutoff current	I_{GSS}	—	—	-10	nA	$V_{GS} = -7$ V, $V_{DS} = 0$
Gate to source breakdown voltage	$V_{(BR)GSS}$	-15	—	—	V	$I_G = -100$ μA, $V_{DS} = 0$
Drain current	I_{DSS}^{*1}	8	—	32	mA	$V_{DS} = 5$ V, $V_{GS} = 0$, Pulse test
Gate to source cutoff voltage	$V_{GS(off)}$	-0.1	—	-2.5	V	$V_{DS} = 5$ V, $I_D = 1$ μA
Forward transfer admittance	$ y_{fs} $	28	33	—	mS	$V_{DS} = 5$ V, $I_D = 8$ mA, $f = 1$ kHz
Input capacitance	Ciss	—	4	5	pF	$V_{DS} = 5$ V, $I_D = 8$ mA, $f = 1$ MHz
Output noise voltage	V_N	—	—	20	mV	See Test Circuit

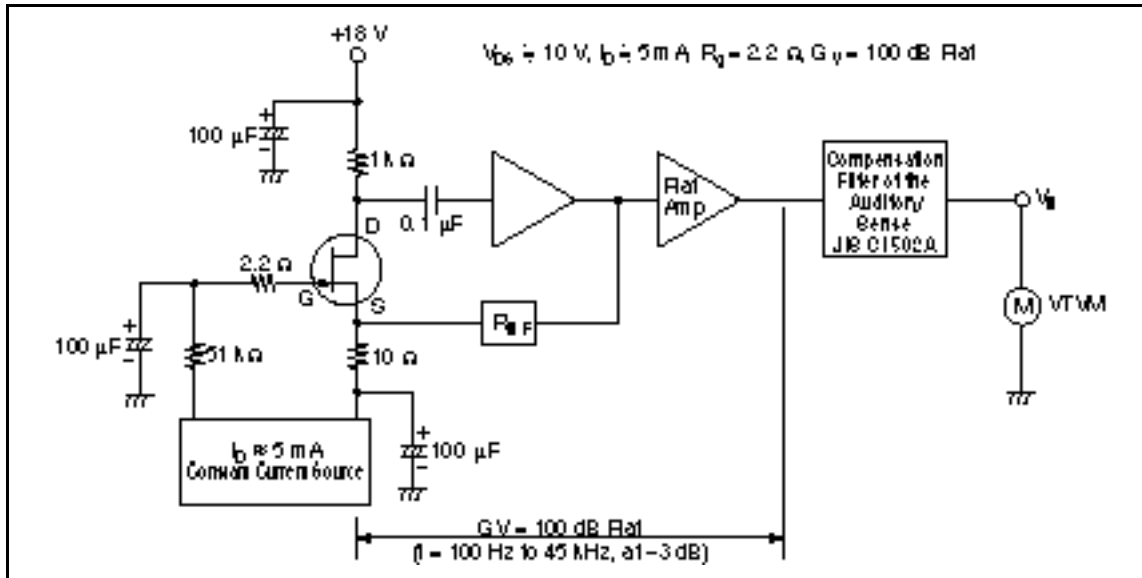
Note: 1. The 2SK980 is grouped by I_{DSS} as follows.

Grade	F	G
Mark	XAF	XAG
$I_{DSS(mA)}$	8 to 20	16 to 32



2SK980





2SK980

When using this document, keep the following in mind:

1. This document may, wholly or partially, be subject to change without notice.
2. All rights are reserved: No one is permitted to reproduce or duplicate, in any form, the whole or part of this document without Hitachi's permission.
3. Hitachi will not be held responsible for any damage to the user that may result from accidents or any other reasons during operation of the user's unit according to this document.
4. Circuitry and other examples described herein are meant merely to indicate the characteristics and performance of Hitachi's semiconductor products. Hitachi assumes no responsibility for any intellectual property claims or other problems that may result from applications based on the examples described herein.
5. No license is granted by implication or otherwise under any patents or other rights of any third party or Hitachi, Ltd.
6. **MEDICAL APPLICATIONS:** Hitachi's products are not authorized for use in **MEDICAL APPLICATIONS** without the written consent of the appropriate officer of Hitachi's sales company. Such use includes, but is not limited to, use in life support systems. Buyers of Hitachi's products are requested to notify the relevant Hitachi sales offices when planning to use the products in **MEDICAL APPLICATIONS**.

HITACHI

Hitachi, Ltd.

Semiconductor & IC Div.
Nippon Bldg., 2-6-2, Ohite-machi, Chiyoda-ku, Tokyo 100, Japan
Tel: Tokyo (03) 3270-2111
Fax: (03) 3270-5109

For further information write to:

Hitachi America, Ltd.
Semiconductor & IC Div.
2000 Sierra Point Parkway
Brisbane, CA. 94005-4835
U.S.A.
Tel: 415-589-8300
Fax: 415-589-4207

Hitachi Europe GmbH
Electronic Components Group
Continental Europe
Dornacher StraÙe 3
D-85622 Feldkirchen
München
Tel: 089-9 94 80 0
Fax: 089-9 29 30 00

Hitachi Europe Ltd.
Electronic Components Div.
Northern Europe Headquarters
Whitbrook Park
Lower Cookham Road
M Maidenhead
Berkshire SL6 8YA
United Kingdom
Tel: 0628-585000
Fax: 0628-778322

Hitachi Asia Pte. Ltd.
45 Collyer Quay #20-00
Hitachi Tower
Singapore 0404
Tel: 535-2100
Fax: 535-1533

Hitachi Asia (Hong Kong) Ltd.
Unit 705, North Tower,
World Finance Centre
Harbour City, Canton Road
Tsim Sha Tsui, Kowloon
Hong Kong
Tel: 27359218
Fax: 27308074