
2SK980

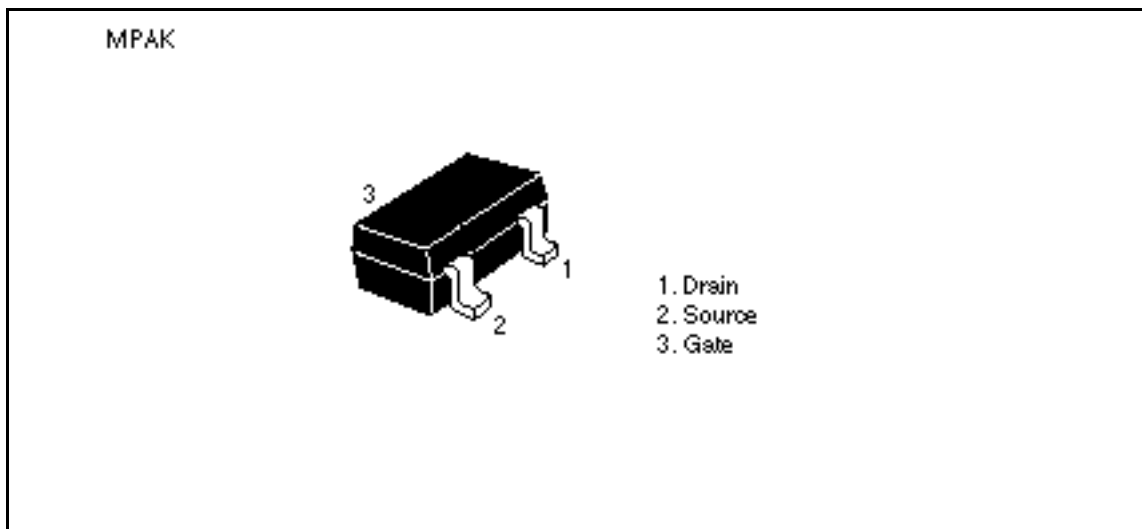
Silicon N-Channel Junction FET

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

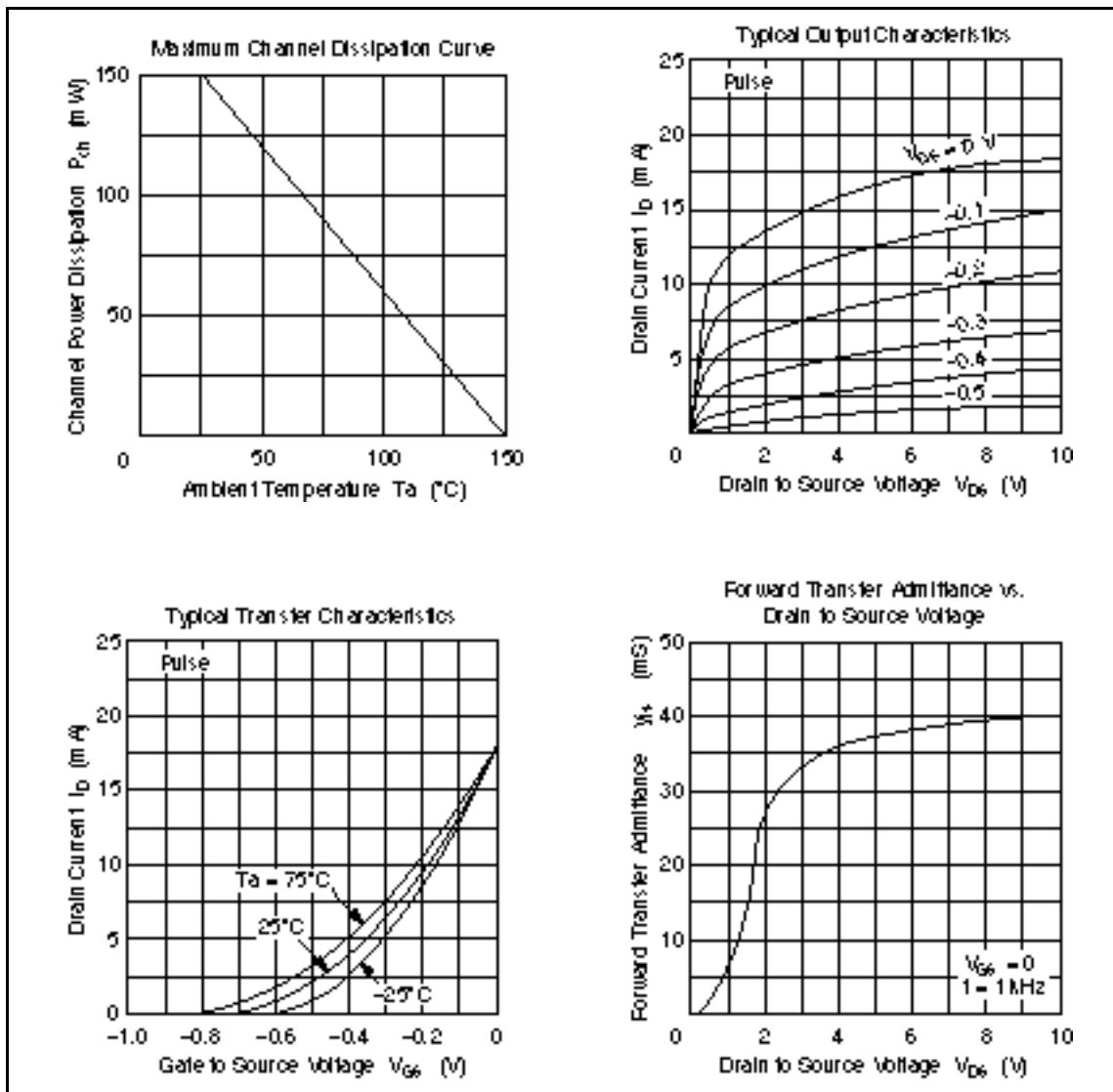
Note: 1. at $V_{GS} = -3$ V

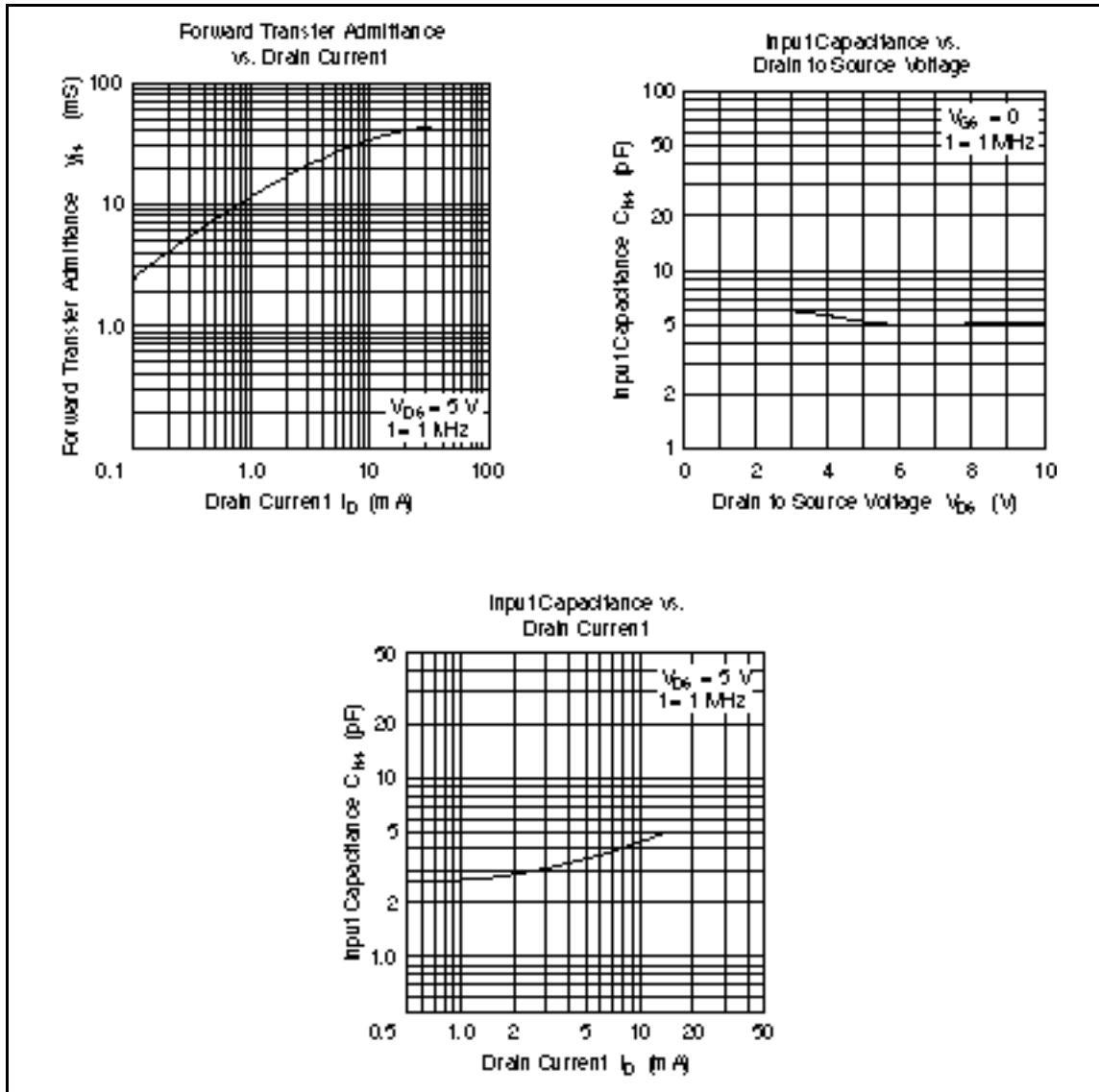
Electrical Characteristics (Ta = 25°C)

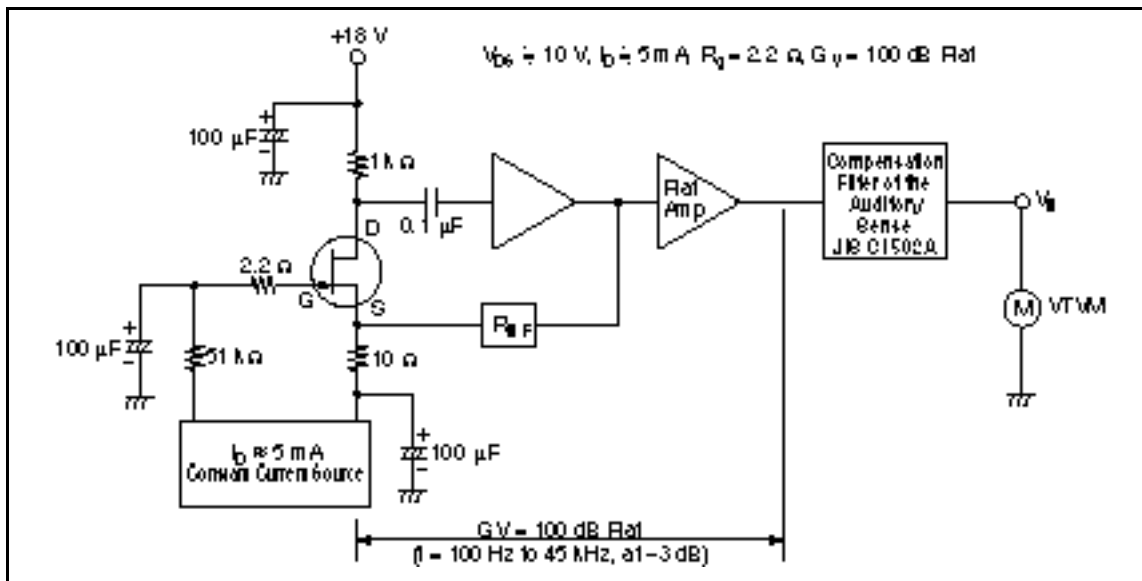
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Drain to source cutoff current	I_{DSX}	—	—	-100	μA	$V_{DS} = 12$ V, $V_{GS} = -3$ V
Gate cutoff current	I_{GSS}	—	—	-10	nA	$V_{GS} = -7$ V, $V_{DS} = 0$
Gate to source breakdown voltage	$V_{(BR)GSS}$	-15	—	—	V	$I_G = -100$ μA, $V_{DS} = 0$
Drain current	I_{DSS}^{*1}	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







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