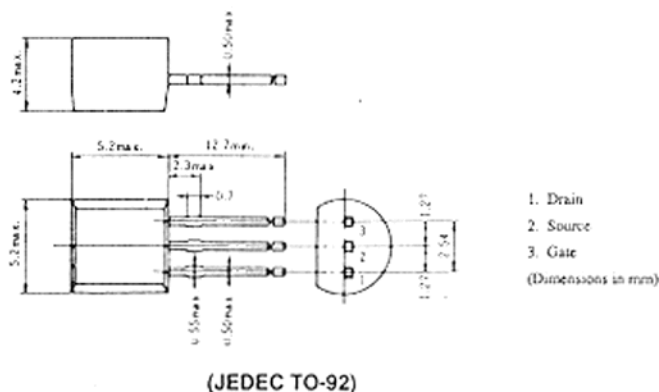


2SK291

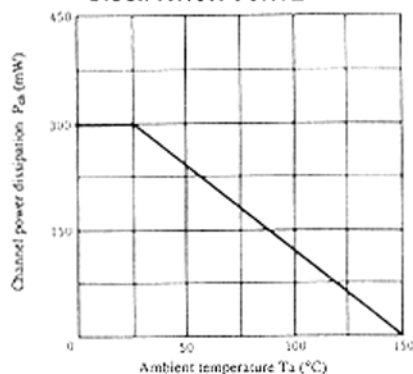
SILICON N-CHANNEL JUNCTION FET
LOW FREQUENCY LOW NOISE AMPLIFIER



■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SK291	Unit
Gate to drain voltage	V_{GD0}	-15	V
Gate to source voltage	V_{GS0}	-15	V
Drain current	I_D	50	mA
Gate current	I_G	5	mA
Channel power dissipation	P_{ch}	300	mW
Channel temperature	T_{ch}	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

MAXIMUM CHANNEL POWER DISSIPATION CURVE



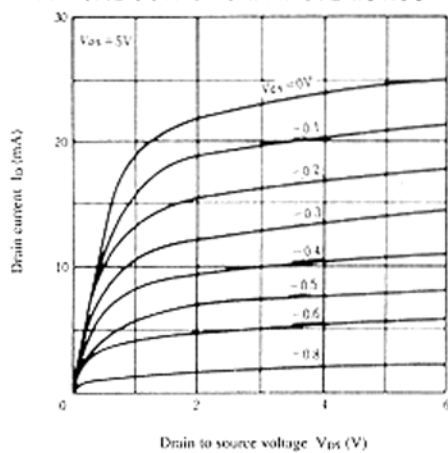
■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Gate to drain breakdown voltage	$V_{(BR)GD0}$	$I_G = -100\mu A$	-15	—	—	V
Gate to source breakdown voltage	$V_{(BR)GS0}$	$I_G = -100\mu A$	-15	—	—	V
Gate cutoff current	I_{GS}	$V_{DS} = -7V, V_{GS} = 0$	—	—	10	nA
Drain current	I_{DS}^*	$V_{DS} = 5V, V_{GS} = 0$	5	—	50	mA
Gate to source cutoff voltage	$V_{GS(off)}$	$V_{DS} = 5V, I_D = 100\mu A$	—	—	-3.0	V
Forward transfer admittance	$ y_{fs} $	$V_{DS} = 5V, V_{GS} = 0, f = 1kHz$	25	45	—	mS
Input capacitance	C_{iss}	$V_{DS} = 5V, V_{GS} = 0, f = 1MHz$	—	8.5	—	pF
Noise voltage referred to input	e_n	$V_{DS} = 5V, I_D = 5mA, R_g = 0, f = 100kHz$	—	1.2	—	nV/ \sqrt{Hz}

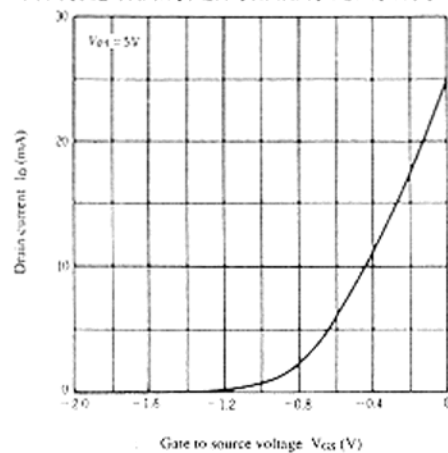
* The 2SK291 is grouped by I_{DS} as follows.

P	Q	R	S	T
5 to 16	14 to 24	20 to 32	28 to 42	35 to 50

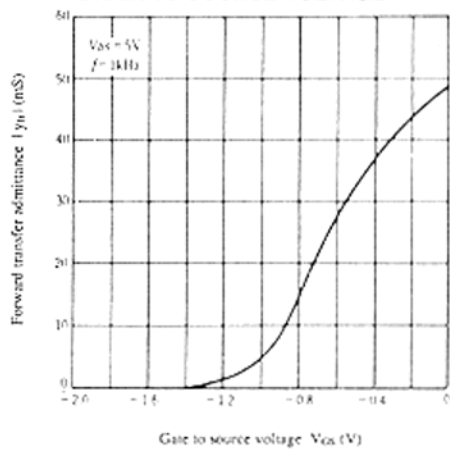
TYPICAL OUTPUT CHARACTERISTICS



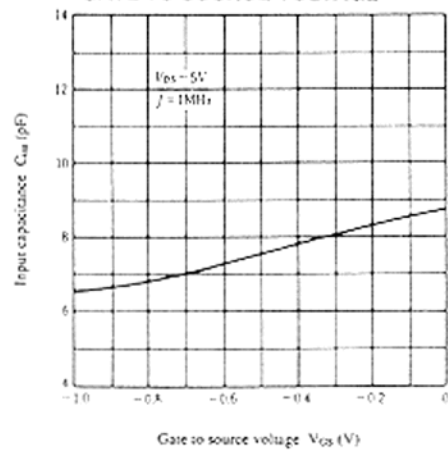
TYPICAL TRANSFER CHARACTERISTICS



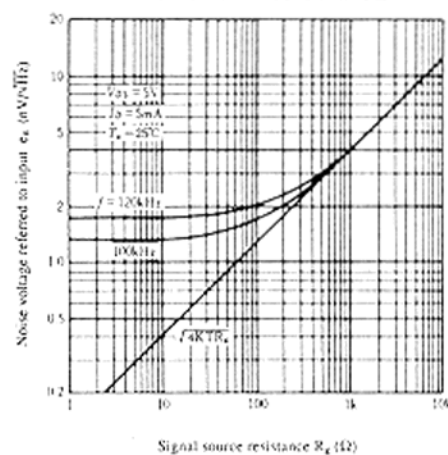
FORWARD TRANSFER ADMITTANCE VS. DRAIN TO SOURCE VOLTAGE



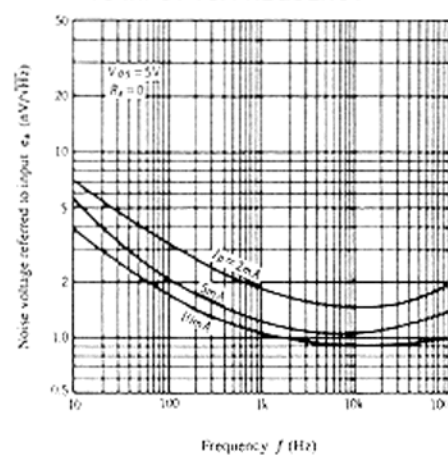
INPUT CAPACITANCE VS. GATE TO SOURCE VOLTAGE



NOISE VOLTAGE REFERRED TO INPUT VS. SIGNAL SOURCE RESISTANCE

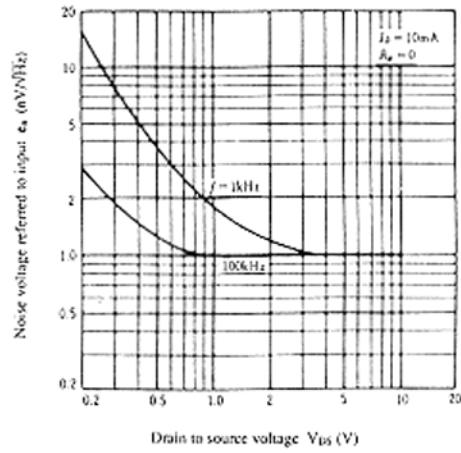


NOISE VOLTAGE REFERRED TO INPUT VS. FREQUENCY

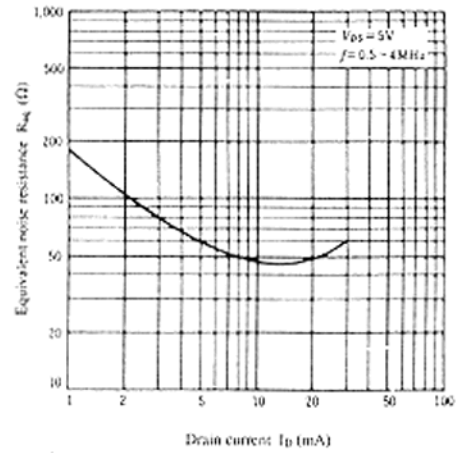


2SK291

NOISE VOLTAGE REFERRED TO INPUT VS. SIGNAL SOURCE RESISTANCE



EQUIVALENT NOISE RESISTANCE VS. DRAIN CURRENT



EQUIVALENT NOISE RESISTANCE VS. FREQUENCY

