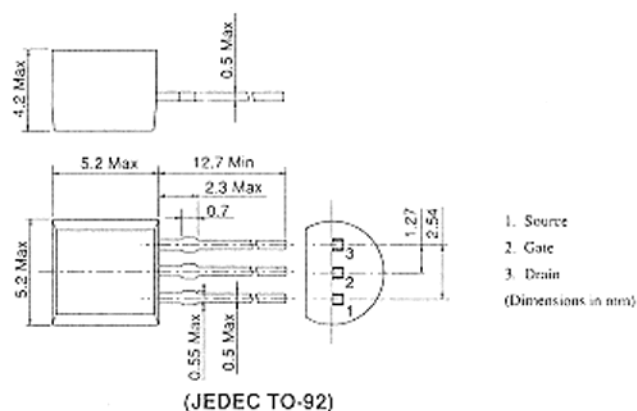


2SK40

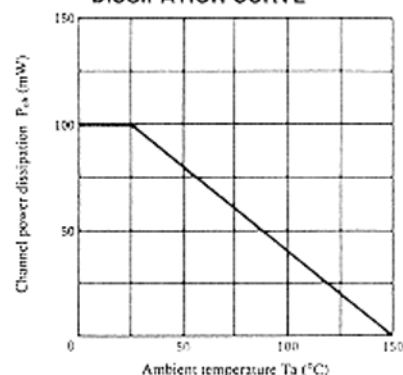
SILICON N-CHANNEL JUNCTION FET
LOW FREQUENCY LOW NOISE AMPLIFIER



■ ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

Item	Symbol	2SK40	Unit
Gate to drain voltage	V_{GDS}	-50	V
Gate to source voltage	V_{GSS}	-50	V
Gate current	I_G	10	mA
Channel power dissipation	P_{ch}	100	mW
Channel temperature	T_{ch}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

MAXIMUM CHANNEL POWER DISSIPATION CURVE



■ ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

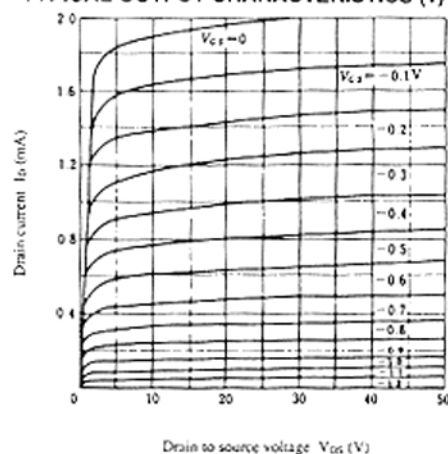
Item	Symbol	Test Condition	min.	typ.	max.	Unit
Gate to source breakdown voltage	$V_{(BR)GSS}$	$I_G = -100\mu\text{A}$, $V_{DS} = 0$	-50	—	—	V
Gate cutoff current	I_{GSS}	$V_{GS} = -30\text{V}$, $V_{DS} = 0$	—	—	-10	nA
Gate to source cutoff voltage	$V_{GS(off)}$	$V_{DS} = 15\text{V}$, $I_D = 0.1\mu\text{A}$	-0.4	—	-5.0	V
Drain current	I_{DSS}^*	$V_{DS} = 15\text{V}$, $V_{GS} = 0$	0.6	—	6.5	mA
Forward transfer admittance	$ y_{fs} $	$V_{DS} = 15\text{V}$, $V_{GS} = 0$, $f = 1\text{kHz}$	1.0	—	—	mS
Noise figure	NF	$V_{DS} = 15\text{V}$, $V_{GS} = 0$ $R_g = 100\text{k}\Omega$, $f = 120\text{Hz}$	—	1	5	dB
Input capacitance	C_{iss}	$V_{DS} = 15\text{V}$, $V_{GS} = 0$, $f = 1\text{MHz}$	—	6.7	—	pF
Reverse transfer capacitance	C_{rss}	$V_{DS} = 15\text{V}$, $V_{GS} = 0$, $f = 1\text{MHz}$	—	1.6	—	pF

* The 2SK40 is grouped by I_{DSS} as follows.

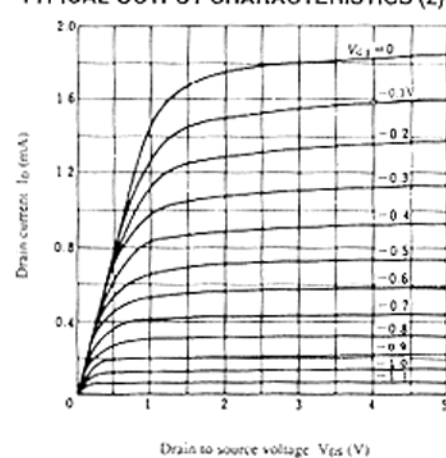
B	C	D
0.6 to 1.4mA	1.2 to 3.0mA	2.6 to 6.5mA

2SK40

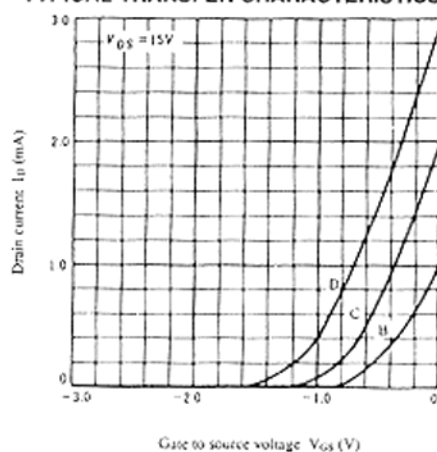
TYPICAL OUTPUT CHARACTERISTICS (1)



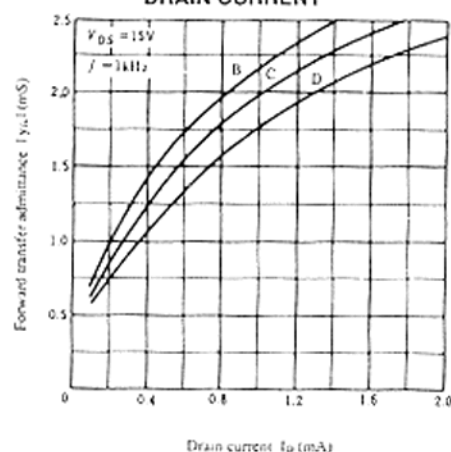
TYPICAL OUTPUT CHARACTERISTICS (2)



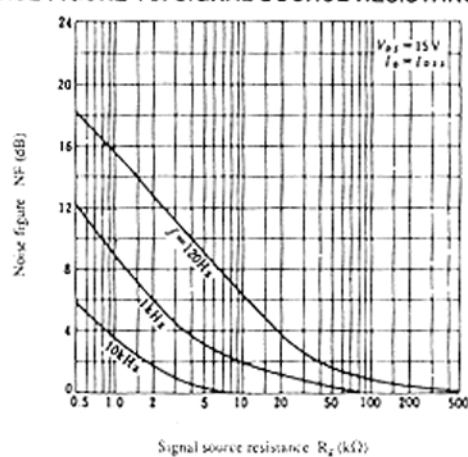
TYPICAL TRANSFER CHARACTERISTICS



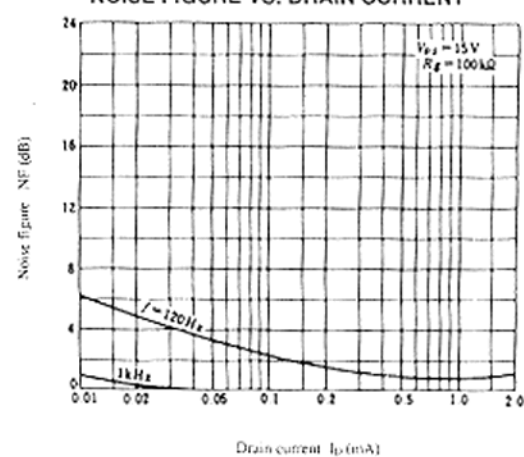
FORWARD TRANSFER ADMITTANCE VS. DRAIN CURRENT



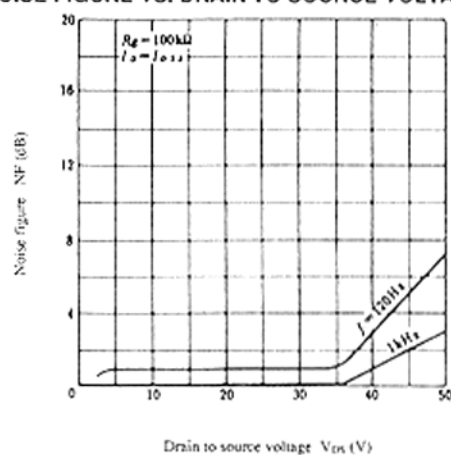
NOISE FIGURE VS. SIGNAL SOURCE RESISTANCE



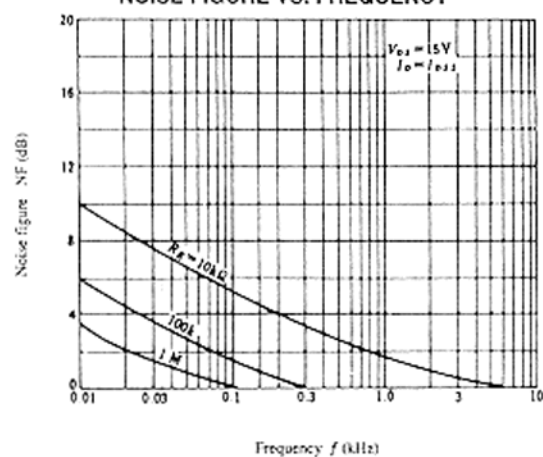
NOISE FIGURE VS. DRAIN CURRENT



NOISE FIGURE VS. DRAIN TO SOURCE VOLTAGE



NOISE FIGURE VS. FREQUENCY



DRAIN CURRENT VS. GATE TO SOURCE CUTOFF VOLTAGE

