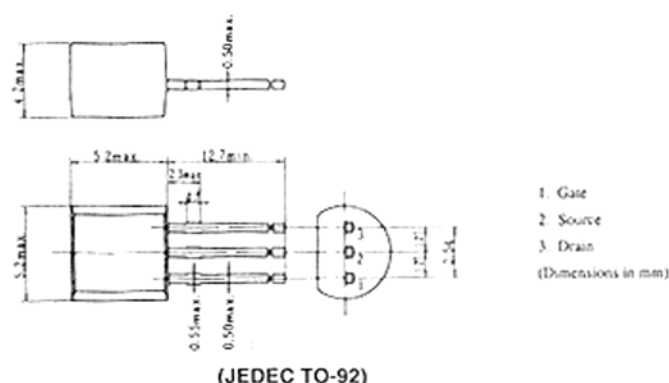


2SK54

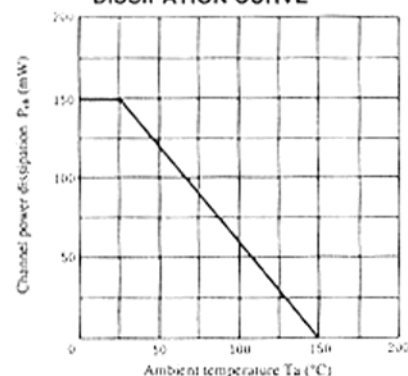
SILICON N-CHANNEL JUNCTION FET
VHF AMPLIFIER, MIXER



■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SK54	Unit
Gate to drain voltage	V_{GDO}	-15	V
Gate current	I_G	10	mA
Channel power dissipation	P_{ch}	150	mW
Channel temperature	T_{ch}	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

MAXIMUM CHANNEL POWER DISSIPATION CURVE



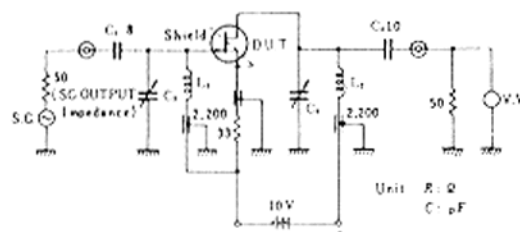
■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Gate to drain breakdown voltage	$V_{(BR)GDO}$	$I_G = -100\mu A, I_S = 0$	-15	—	—	V
Gate cutoff current	I_{GSS}	$V_{GS} = -0.5V, V_{DS} = 0$	—	—	-10	nA
Drain current	I_{DSS}^*	$V_{DS} = 10V, V_{GS} = 0$	0.8	—	5	mA
Gate to source cutoff voltage	$V_{GS(off)}$	$V_{DS} = 10V, I_D = 10\mu A$	-0.3	—	-5.5	V
Forward transfer admittance	$ y_{fs} $	$V_{DS} = 10V, V_{GS} = 0, f = 1kHz$	3	6	—	mS
Input capacitance	C_{iss}	$V_{DS} = 10V, V_{GS} = 0, f = 1MHz$	—	3	—	pF
Reverse transfer capacitance	C_{rss}	$V_{DS} = 10V, V_{GS} = 0, f = 1MHz$	—	0.4	0.6	pF
Power gain	PG	$V_{DD} = 10V, R_S = 33\Omega, f = 100MHz$	—	15	—	dB
Noise figure	NF		—	2.0	3.5	dB

* The 2SK54 is grouped by I_{DSS} as follows.

B	C
0.8 to 2.4mA	2 to 5mA

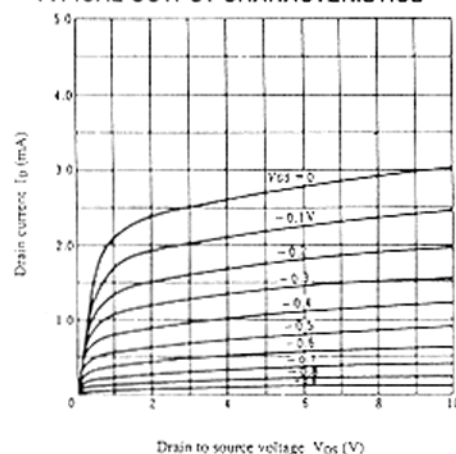
POWER GAIN AND NOISE FIGURE TEST CIRCUIT



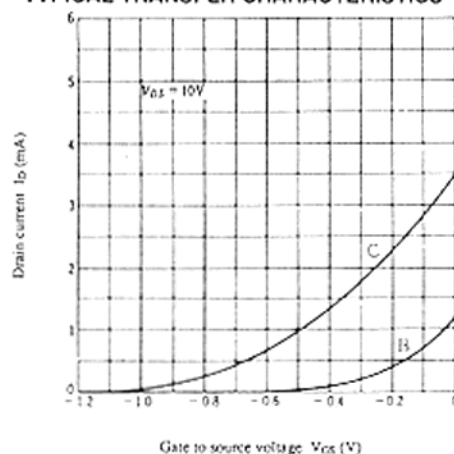
C_2, C_5 : 30pF max. Variable Air
 L_1 : 3T 1.0mm Copper Ribbon, Tin plated 10mm inside dia.
 5.0mm pitch.
 L_2 : 3.5T 1.0mm Copper Ribbon, Tin plated 10mm inside dia.
 5.0mm pitch.

Unit: $R: \Omega$
 $C: pF$

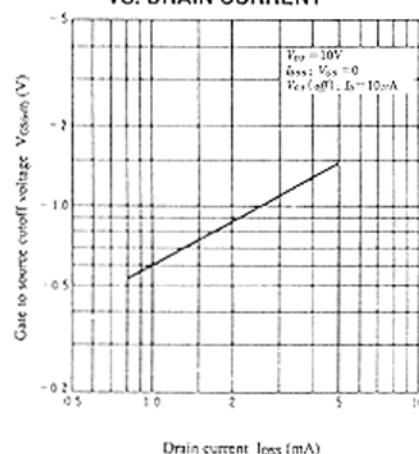
TYPICAL OUTPUT CHARACTERISTICS



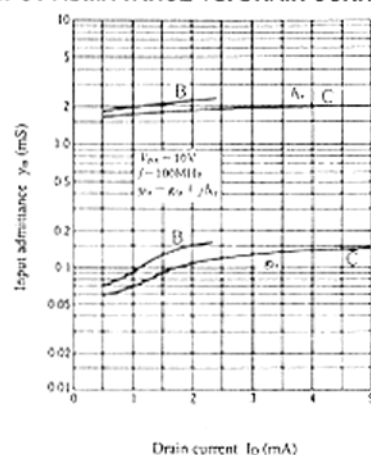
TYPICAL TRANSFER CHARACTERISTICS



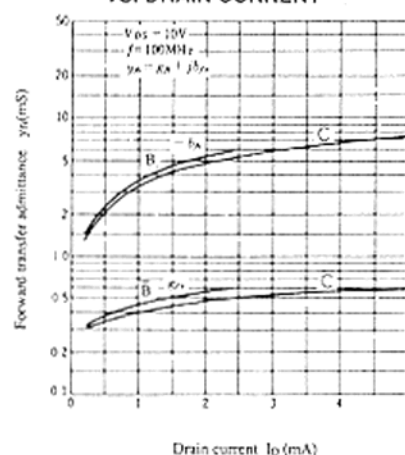
GATE TO SOURCE CUTOFF VOLTAGE VS. DRAIN CURRENT



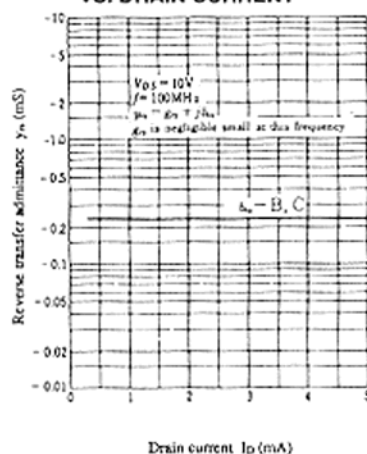
INPUT ADMITTANCE VS. DRAIN CURRENT



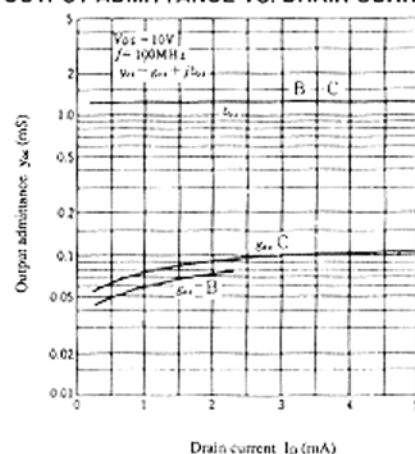
FORWARD TRANSFER ADMITTANCE VS. DRAIN CURRENT



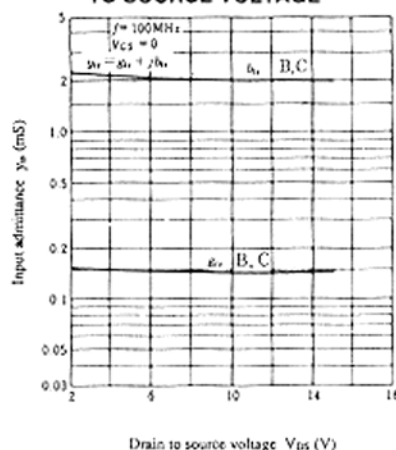
REVERSE TRANSFER ADMITTANCE
VS. DRAIN CURRENT



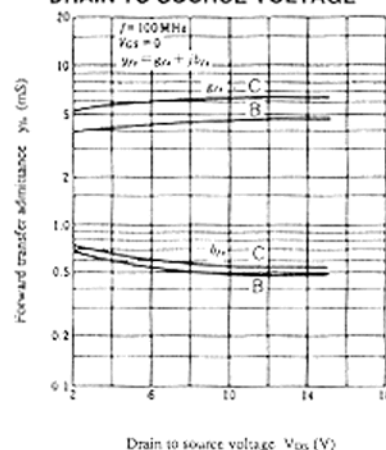
OUTPUT ADMITTANCE VS. DRAIN CURRENT



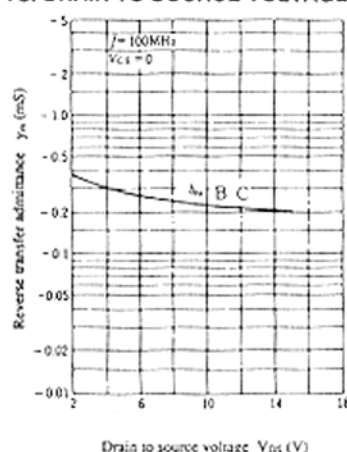
INPUT ADMITTANCE VS. DRAIN
TO SOURCE VOLTAGE



FORWARD TRANSFER ADMITTANCE VS.
DRAIN TO SOURCE VOLTAGE



REVERSE TRANSFER ADMITTANCE
VS. DRAIN TO SOURCE VOLTAGE



OUTPUT ADMITTANCE VS. DRAIN
TO SOURCE VOLTAGE

