

**2SK937**

## High-Frequency General-Purpose Amplifier Applications

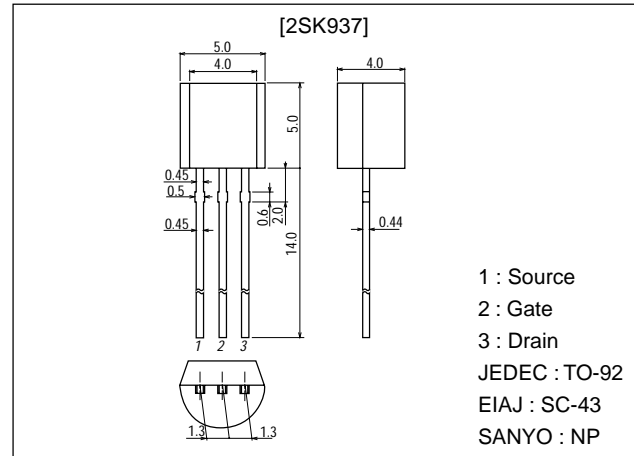
### Features

- Adoption of FBET process.
- Large  $|y_{fs}|$ .
- Small Ciss.

### Package Dimensions

unit:mm

2019B



### Specifications

#### Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	$V_{DSX}$		40	V
Gate-to-Drain Voltage	$V_{GDS}$		-40	V
Gate Current	$I_G$		10	mA
Drain Current	$I_D$		100	mA
Allowable Power Dissipation	$P_D$		300	mW
Junction Temperature	$T_J$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

#### Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	$V_{(BR)GDS}$	$I_G = -10\mu\text{A}$ , $V_{DS} = 0$	-40			V
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS} = -20\text{V}$ , $V_{DS} = 0$			-1.0	nA
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 10\text{V}$ , $V_{GS} = 0$	40*		75*	mA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10\text{V}$ , $I_D = 100\mu\text{A}$	-2.0	-3.0	-5.0	V
Forward Transfer Admittance	$ y_{fs} _1$	$V_{DS} = 10\text{V}$ , $I_D = 10\text{mA}$ , $f = 1\text{kHz}$	10	15		mS
	$ y_{fs} _2$	$V_{DS} = 10\text{V}$ , $V_{GS} = 0$ , $f = 1\text{kHz}$	22	30		mS

\* : The 2SK937 is classified by  $I_{DSS}$  as follows (unit : mA) :

40	Y3	52	48	Y4	63	57	Y5	75
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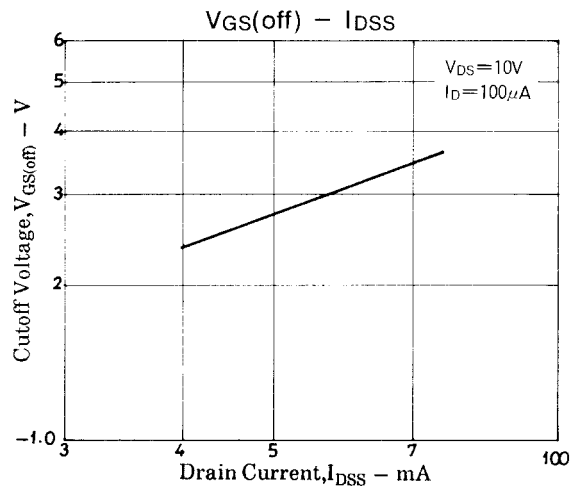
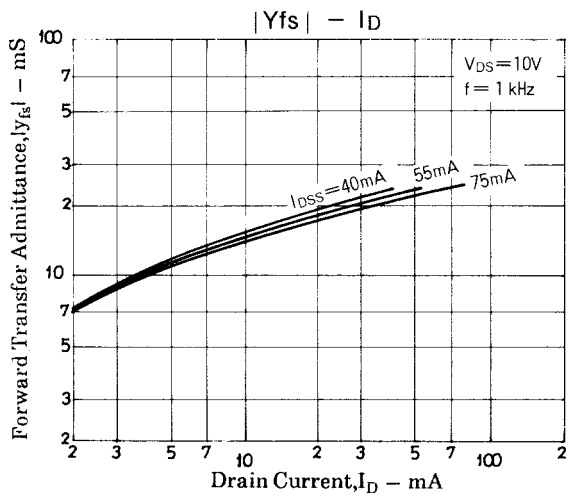
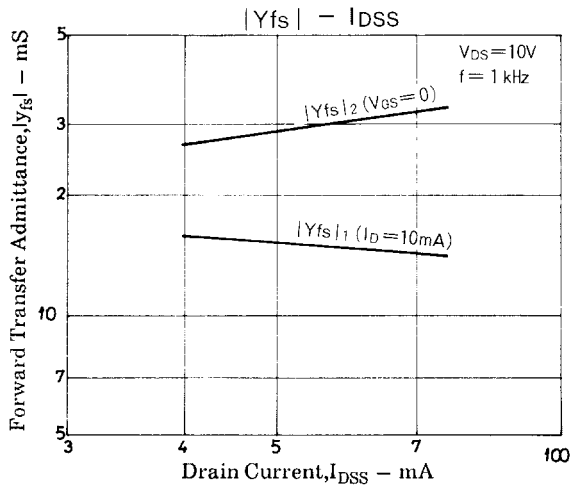
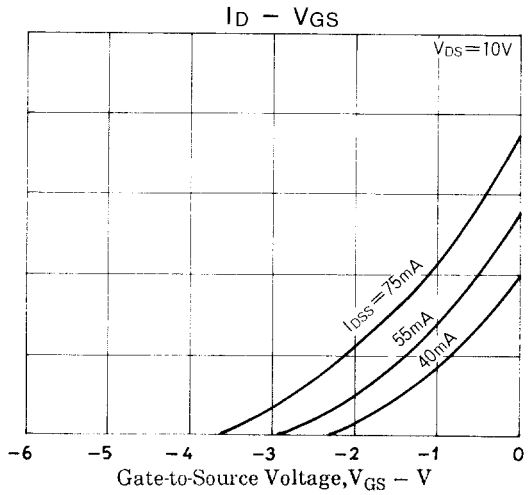
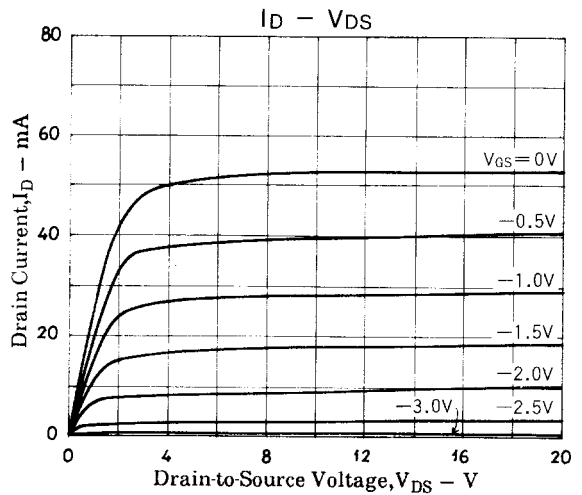
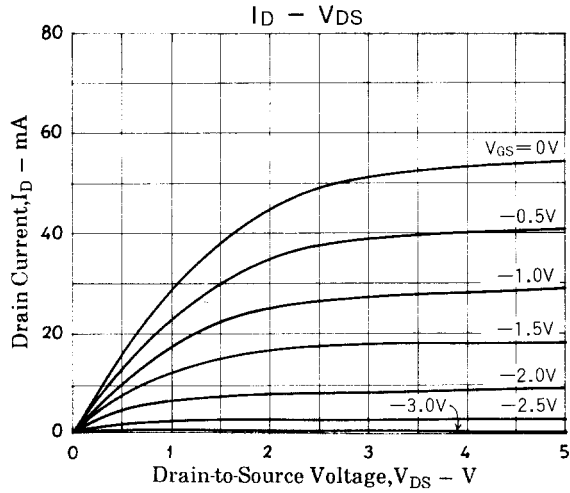
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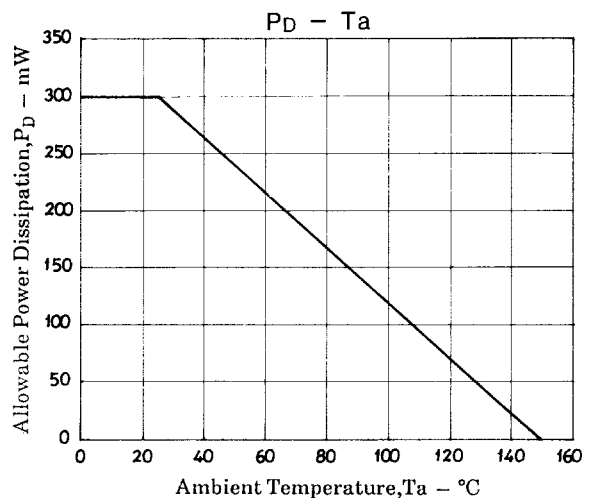
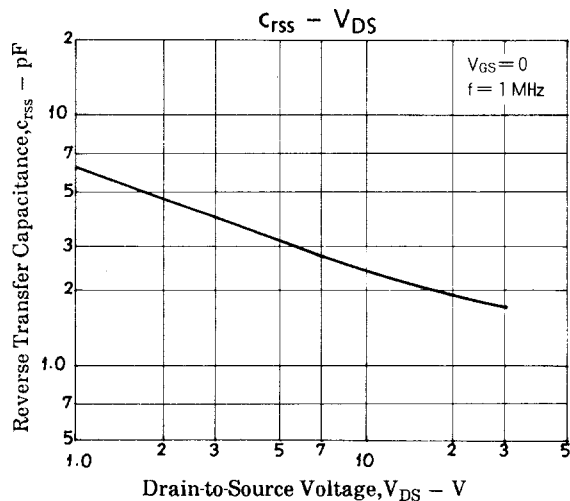
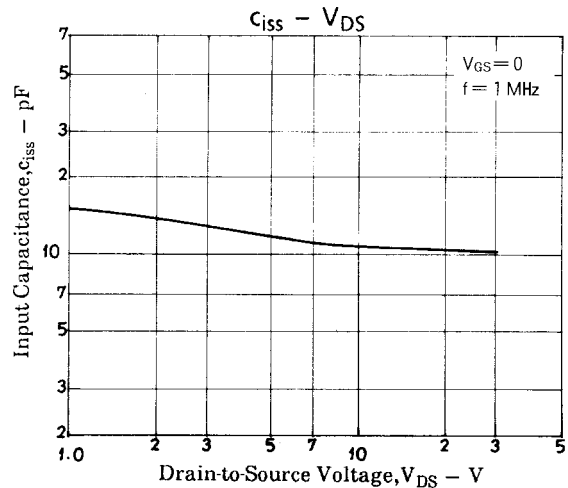
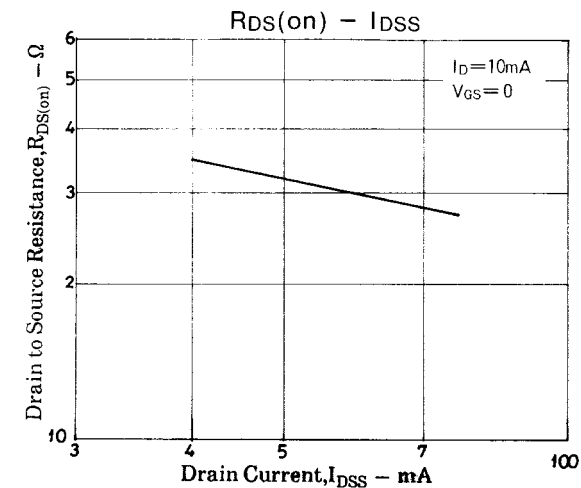
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Parameter	Symbol	Conditions	Ratings	Unit
Input Capacitance	Ciss	$V_{DS}=10V, V_{GS}=0, f=1MHz$	11	pF
Reverse Transfer Capacitance	Crss	$V_{DS}=10V, V_{GS}=0, f=1MHz$	2.5	pF
Noise Figure	NF	$V_{DS}=10V, R_g=1k\Omega, I_D=1mA, f=1kHz$	1.5	dB



## 2SK937



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