

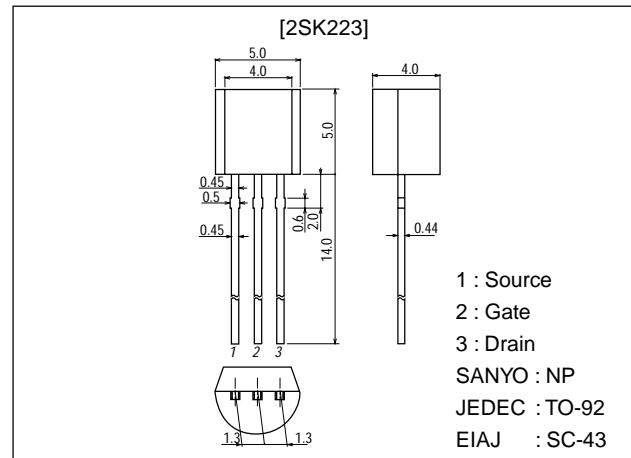
**2SK223****High Voltage Driver Applications****Features**

- Ultrahigh withstand voltage ( $V_{GDS} \geq -80V$ ).
- Due to low gate leakage currents even at high voltage, the 2SK223 is suitable for a wide range of application ( $I_{GDL} = 1nA/V_{DS} = 50V$ ,  $I_D = 1mA$ ).
- High  $|y_{fs}|$  ( $|y_{fs}| = 20mS/V_{DS} = 30V$ ,  $f = 1kHz$ ).

**Package Dimensions**

unit:mm

2019B

**Specifications****Absolute Maximum Ratings at  $T_a = 25^\circ C$** 

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	$V_{DSS}$		80	V
Gate-to-Drain Voltage	$V_{GDS}$		-80	V
Gate Current	$I_G$		10	mA
Allowable Power Dissipation	$P_D$		400	mW
Junction Temperature	$T_j$		125	$^\circ C$
Storage Temperature	$T_{stg}$		-40 to +125	$^\circ C$

**Electrical Characteristics at  $T_a = 25^\circ C$** 

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	$V_{(BR)GDS}$	$I_G = -100\mu A$	-80			V
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS} = -30V$ , $V_{DS} = 0$			-1.0	nA
Zero-Gate Voltage Drain Current	$I_{DSS}^*$	$V_{DS} = 30V$ , $V_{GS} = 0$	1.2*		24*	mA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 30V$ , $I_D = 10\mu A$		-0.75		V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 30V$ , $V_{GS} = 0$ , $f = 1kHz$		20		mS
Input Capacitance	$C_{iss}$	$V_{DS} = 30V$ , $V_{GS} = 0$ , $f = 1MHz$		12		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = 30V$ , $V_{GS} = 0$ , $f = 1MHz$		2.5		pF
Noise Figure	NF	$V_{DS} = 10V$ , $I_D = 3mA$ , $R_g = 10k\Omega$ , $f = 1kHz$		1.5		dB

\* : The 2SK223 is classified by  $I_{DSS}$  as follows (unit : mm) :

1.2	D	3.0	2.5	E	6.0	5.0	F	12.0	10.0	G	24.0
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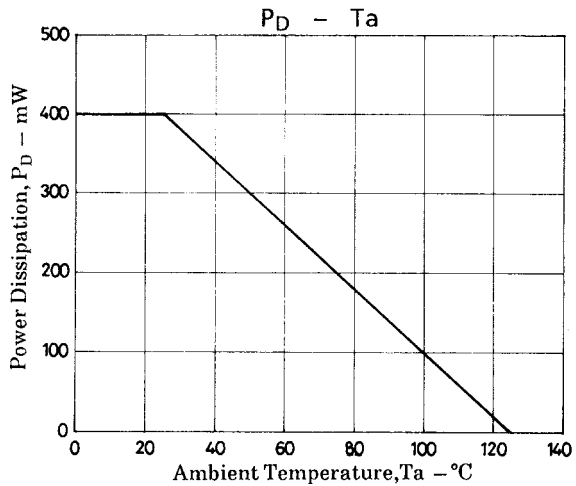
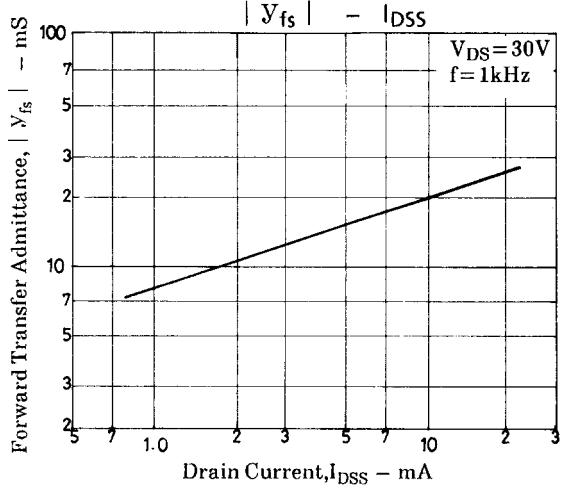
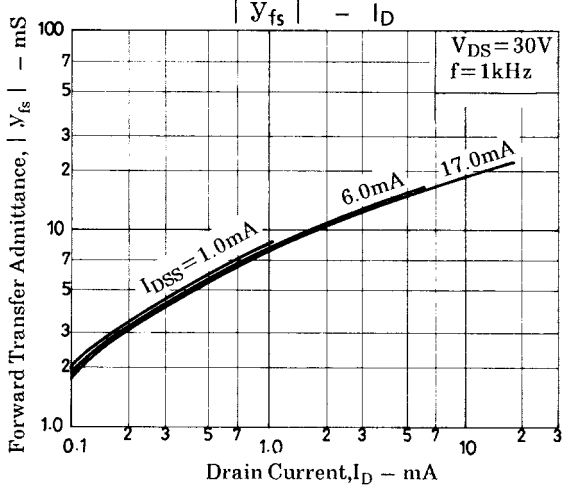
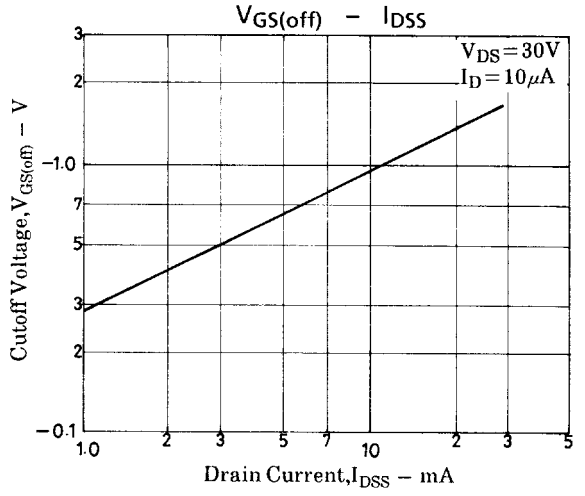
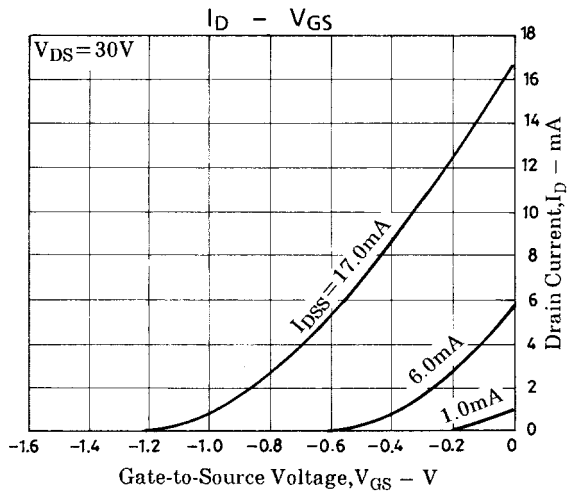
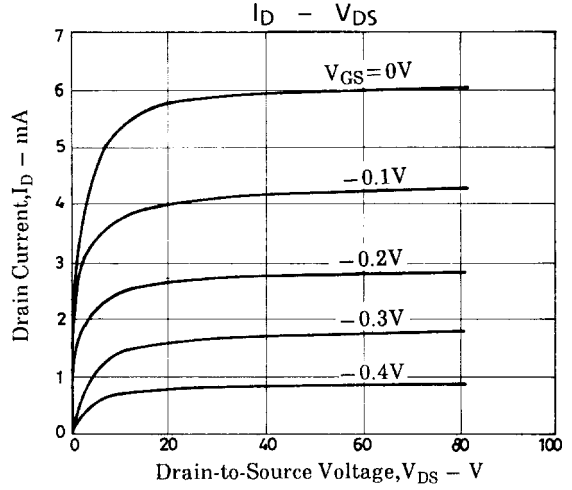
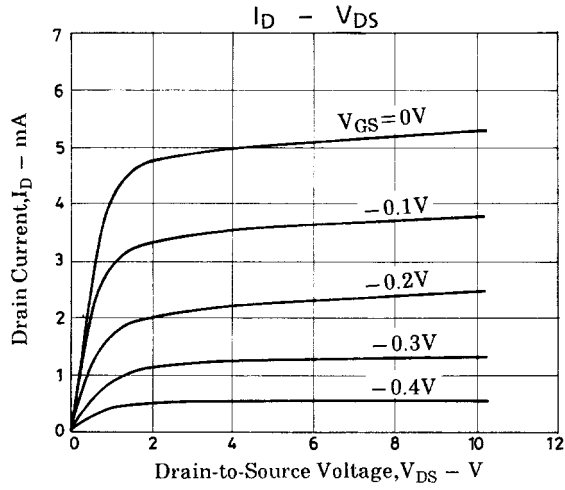
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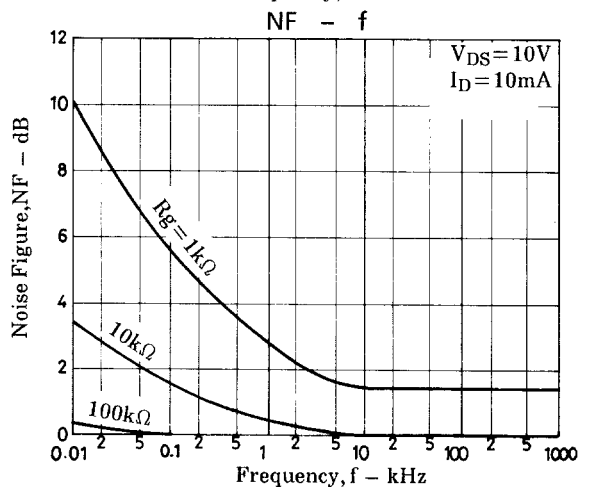
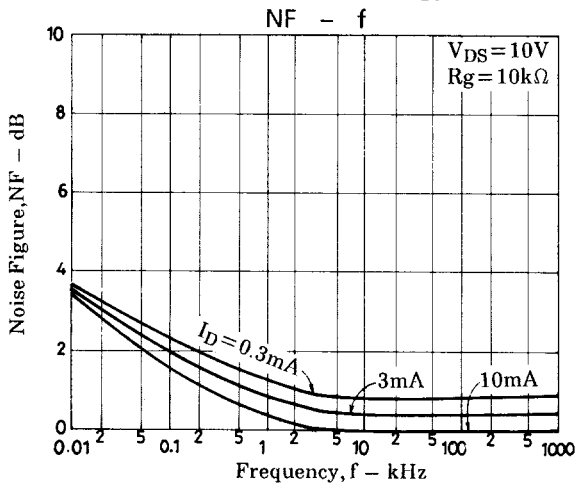
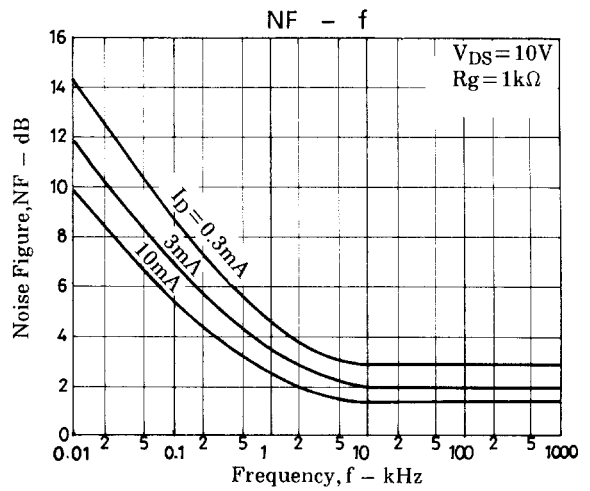
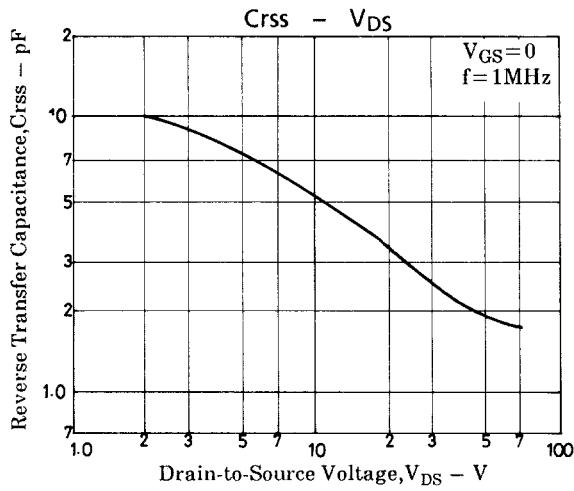
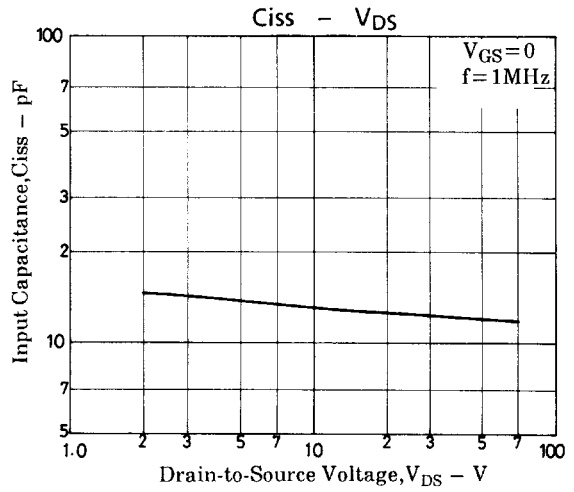
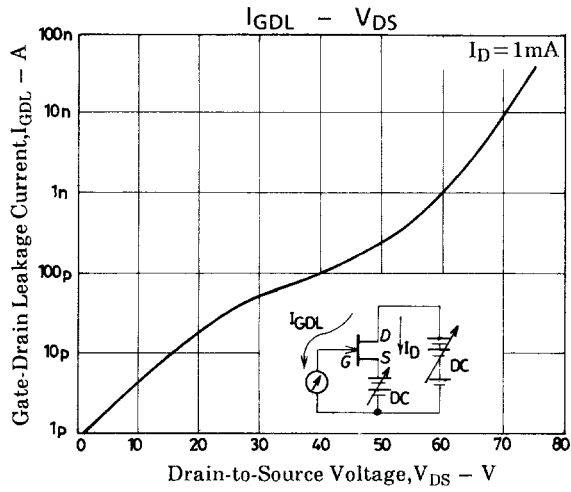
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