

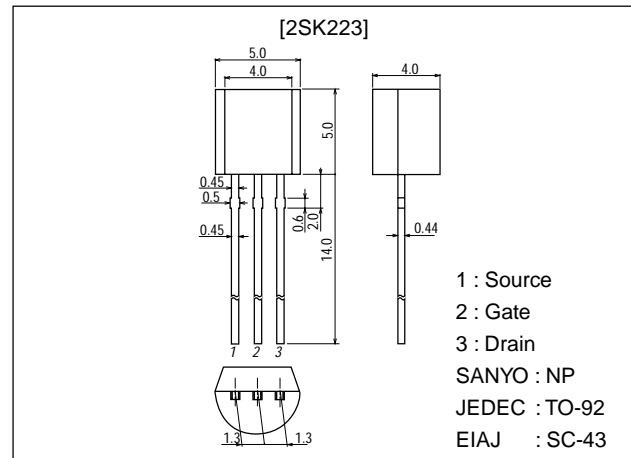
**2SK223****High Voltage Driver Applications****Features**

- 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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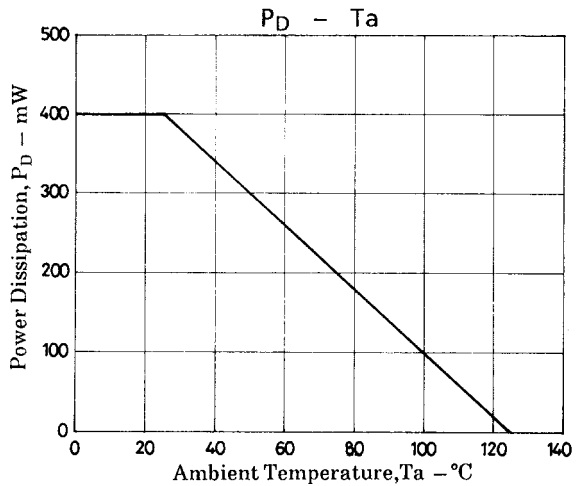
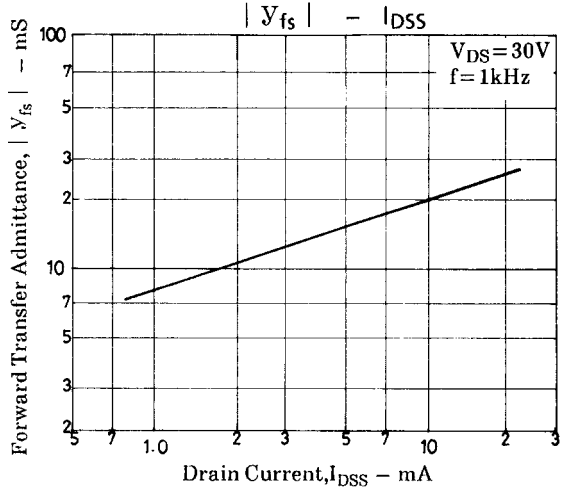
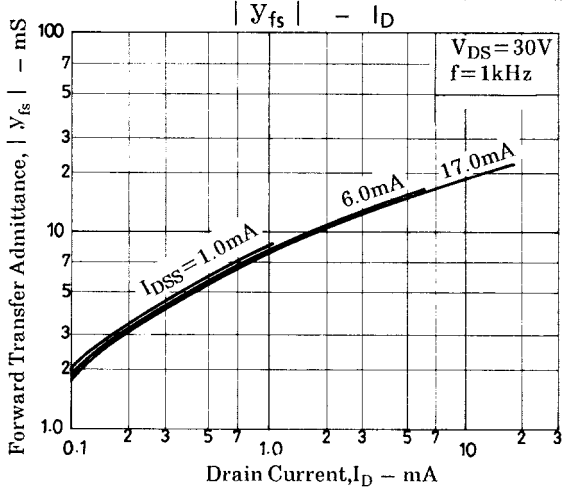
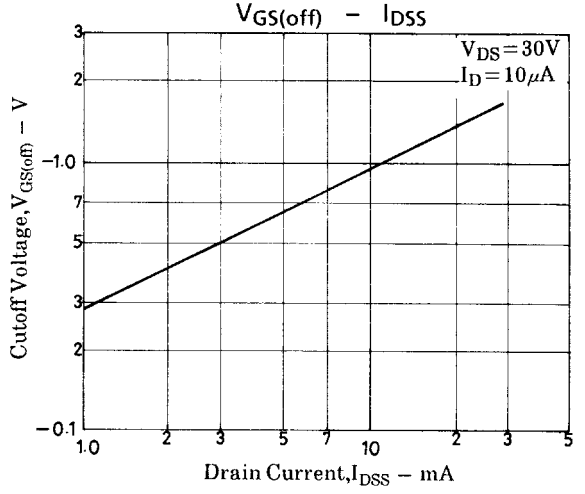
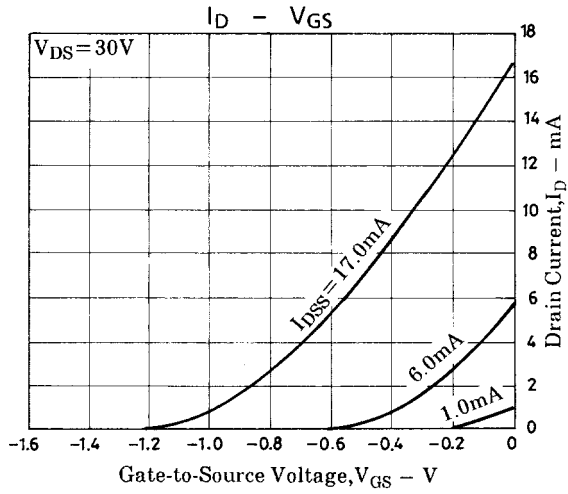
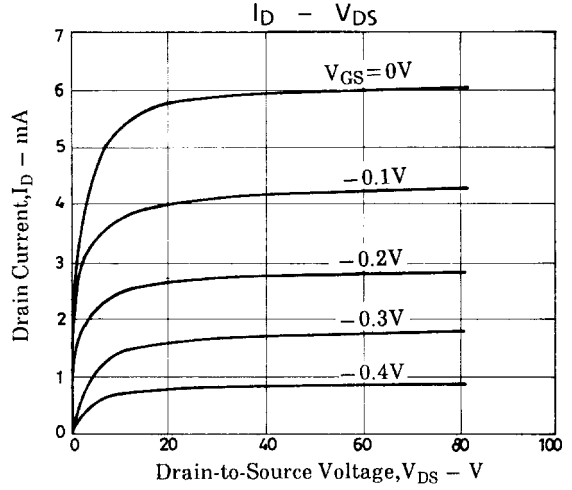
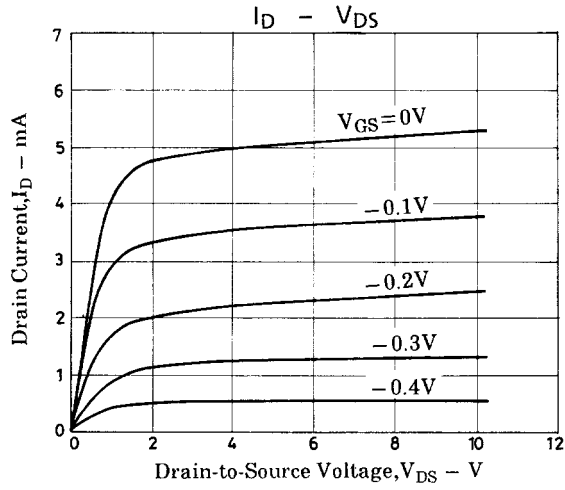
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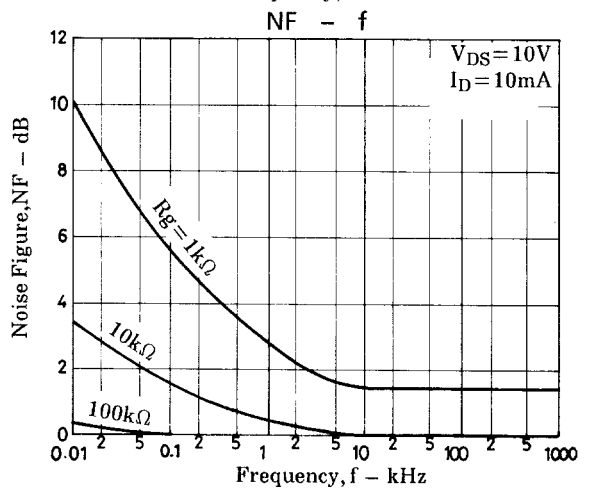
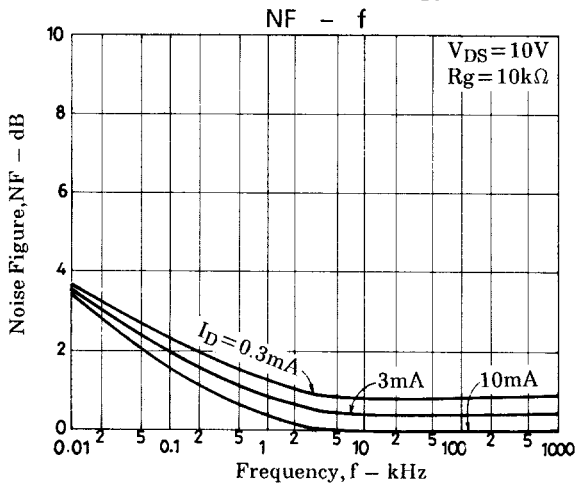
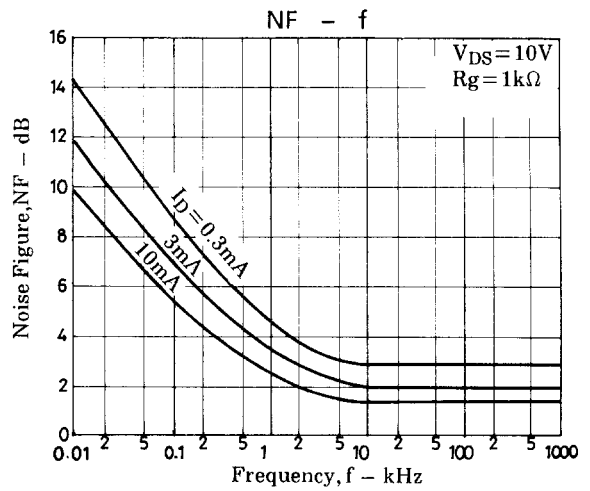
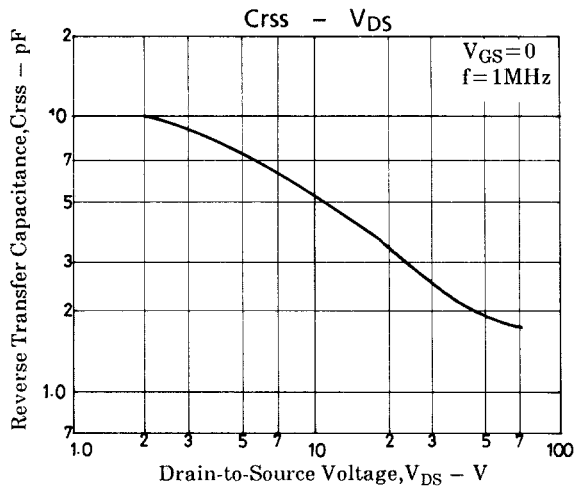
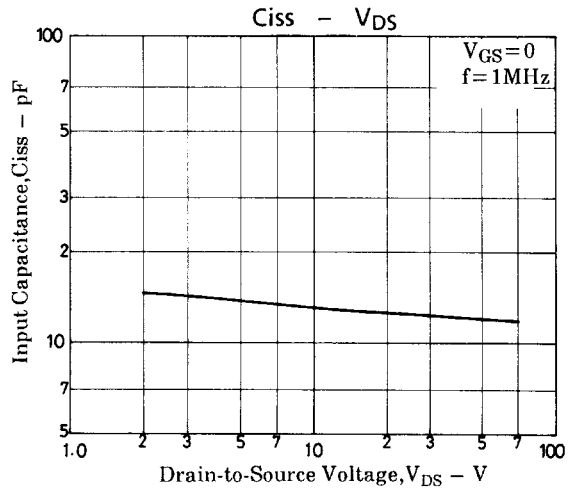
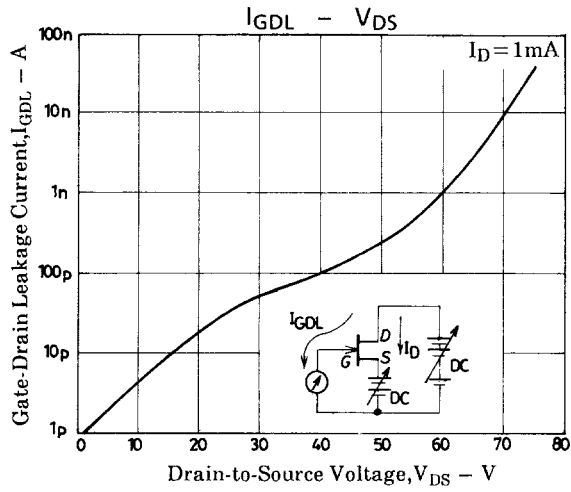
SANYO Electric Co.,Ltd. Semiconductor Company

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

2SK223



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