

<b>SANYO</b>	No.659K	<b>2SK223</b>
		N-Channel Silicon Junction FET

**High Voltage Driver Applications**

**Features**

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

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

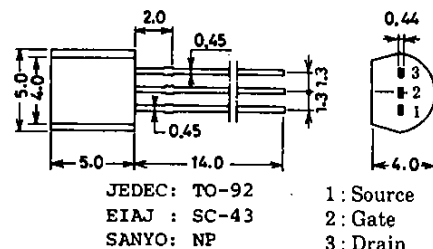
			unit
Drain-to-Source Voltage	$V_{DSS}$	80	V
Gate-to-Drain Voltage	$V_{GDS}$	-80	V
Gate Current	$I_G$	10	mA
Allowable Power Dissipation	$P_D$	400	mW
Junction Temperature	$T_j$	125	$^\circ C$
Storage Temperature	$T_{stg}$	-40 to +125	$^\circ C$

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

			min	typ	max	unit
Gate-to-Drain Breakdown Voltage	$V_{(BR)GDS}$	$I_G = -100\mu A$	-80			V
Gate Cutoff Current	$I_{GSS}$	$V_{GS} = -30V, V_{DS} = 0$			-1.0	nA
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

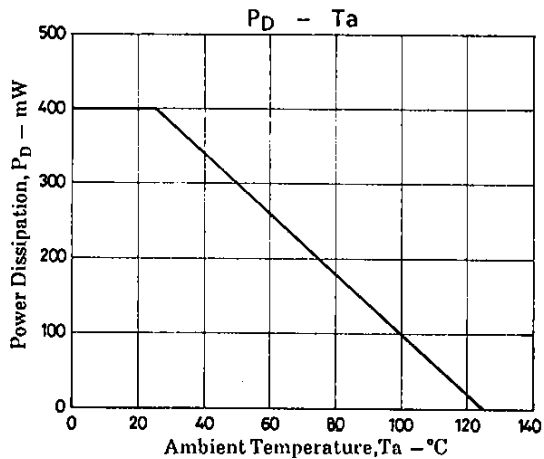
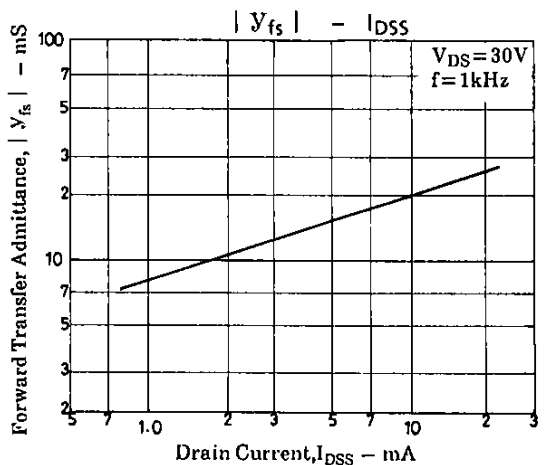
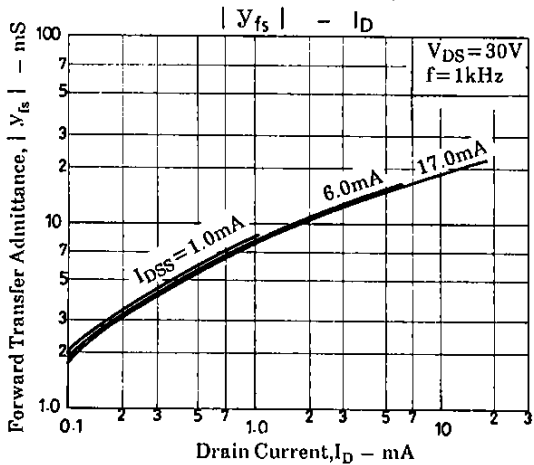
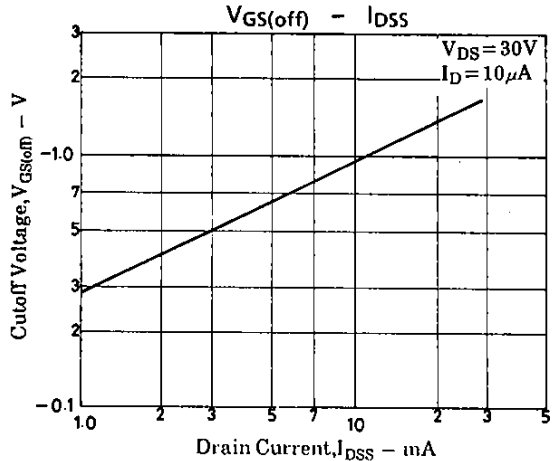
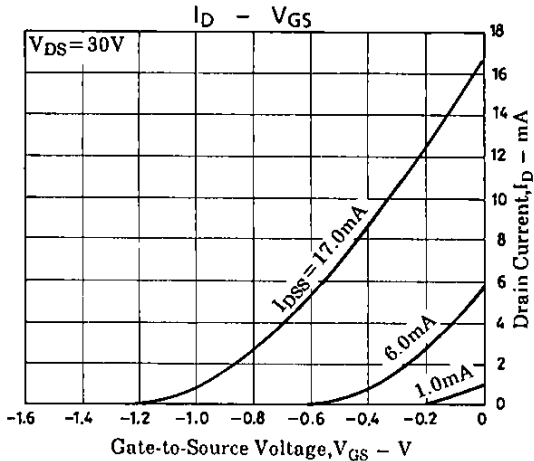
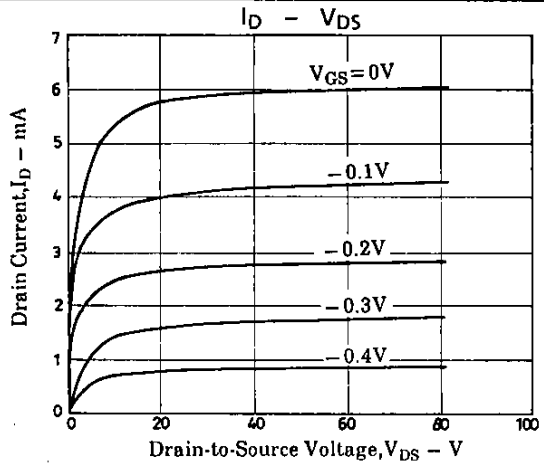
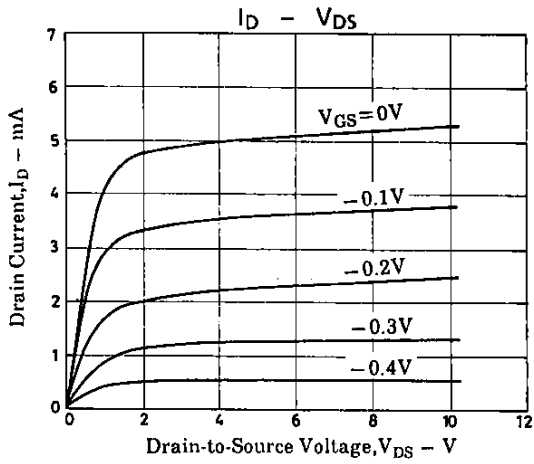
\* The 2SK223 is classified by  $I_{DSS}$  as follows (unit: mm):

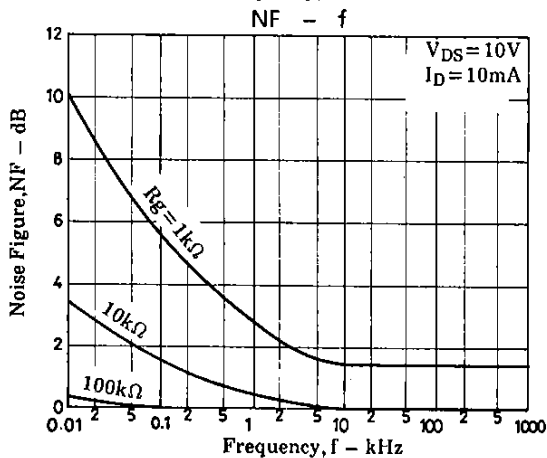
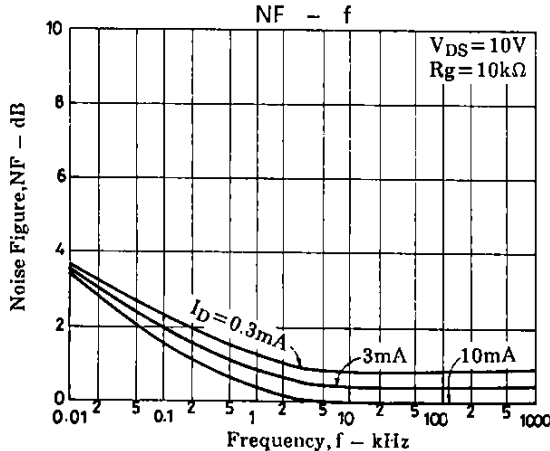
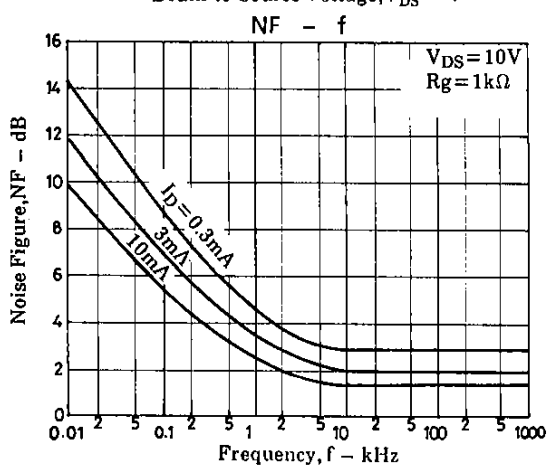
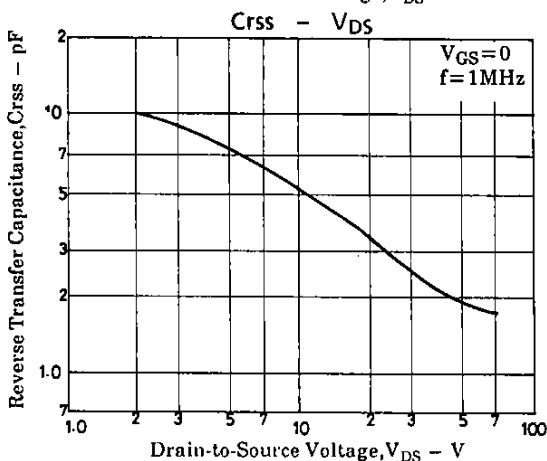
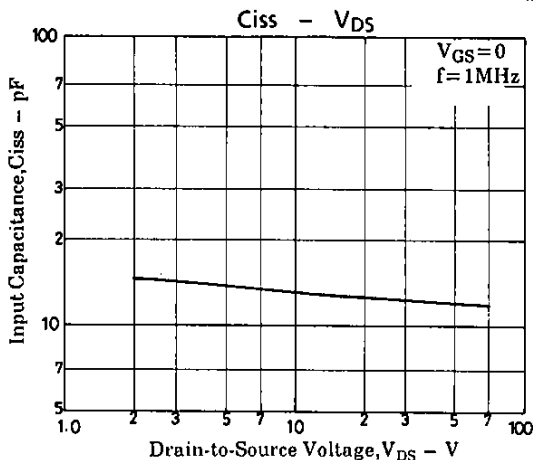
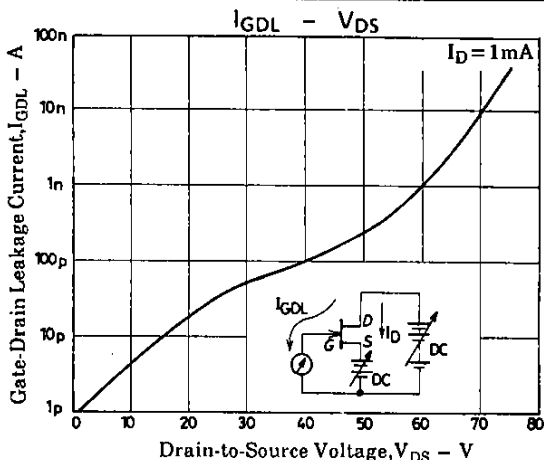
1.2 D 3.0	2.5 E 6.0	5.0 F 12.0	10.0 G 24.0
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**Package Dimensions 2019B**  
(unit: mm)

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