

**2SK445**

Video Camera 1st Stage Applications

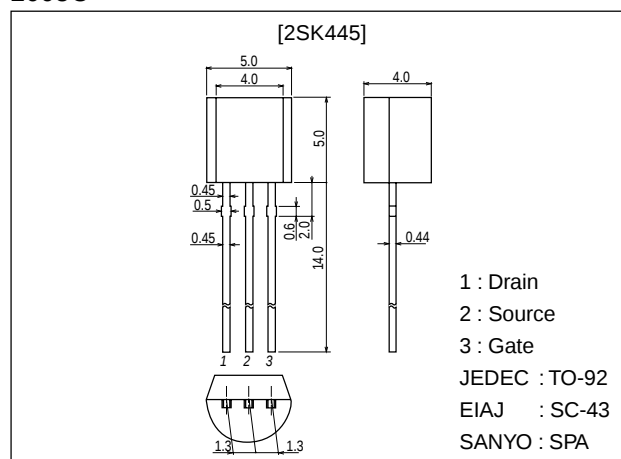
Features

- Large $|y_{fs}|$.
- Small Ciss.
- Ultralow noise figure.
- High frequency, low-frequency, low noise amplifier.

Package Dimensions

unit:mm

2005C



Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		15	V
Gate-to-Drain Voltage	V_{GDS}		-15	V
Gate Current	I_G		10	mA
Drain Current	I_D		50	mA
Allowable Power Dissipation	P_D		300	mW
Junction Temperature	T_J		125	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +125	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	$V_{(BR)GDS}$	$I_G = -10\mu\text{A}$, $V_{DS} = 0\text{V}$	-15			V
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = -10\text{V}$, $V_{DS} = 0\text{V}$			-1.0	nA
Zero-Gate Voltage Drain Current	I_{DSS}^*	$V_{DS} = 5\text{V}$, $V_{GS} = 0\text{V}$	5.0*		38.0*	mA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 5\text{V}$, $I_D = 100\mu\text{A}$		-0.9	-2.0	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 5\text{V}$, $V_{GS} = 0\text{V}$, $f = 1\text{kHz}$	20	30		mS
Input Capacitance	Ciss	$V_{DS} = 5\text{V}$, $V_{GS} = 0\text{V}$, $f = 1\text{MHz}$		9.0		pF
Reverse Transfer Capacitance	Crss	$V_{DS} = 5\text{V}$, $V_{GS} = 0\text{V}$, $f = 1\text{MHz}$		2.8		pF
Noise Figure	NF	$V_{DS} = 5\text{V}$, $R_g = 1\text{k}\Omega$, $I_D = 1\text{mA}$, $f = 1\text{kHz}$		1.5		dB

* : The 2SK445 is classified by $V_{DS} = 5\text{V}$ as follows (unit : mA) :

5.0	F	12.0	10.0	G	24.0	16.0	H	38.0
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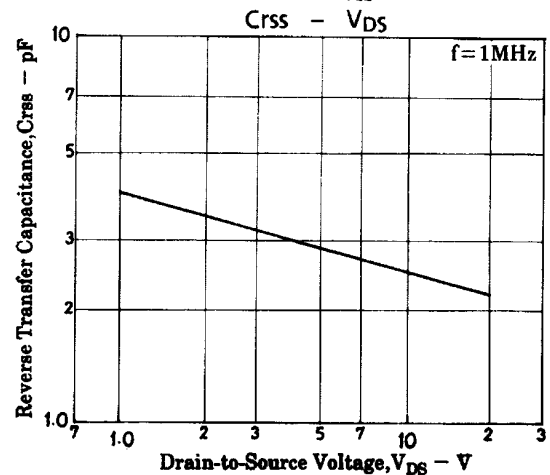
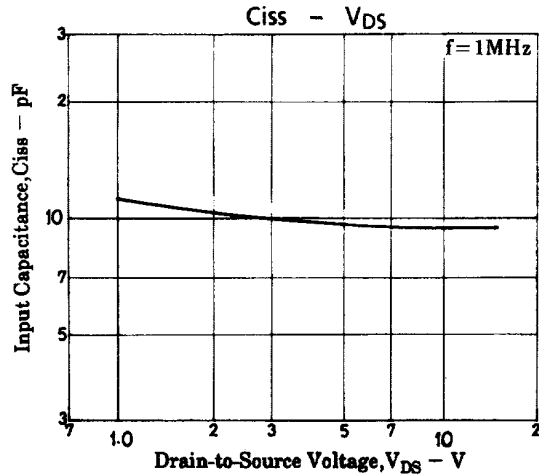
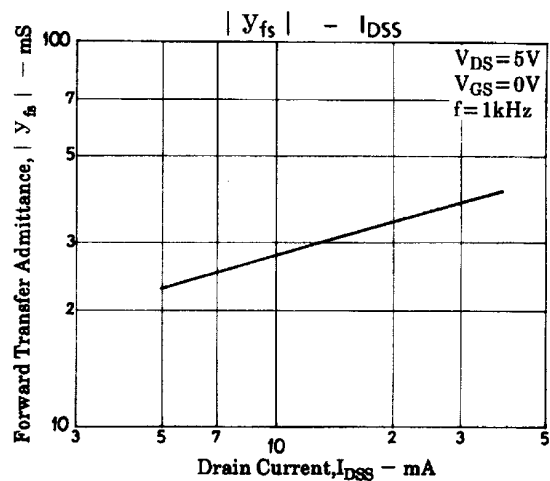
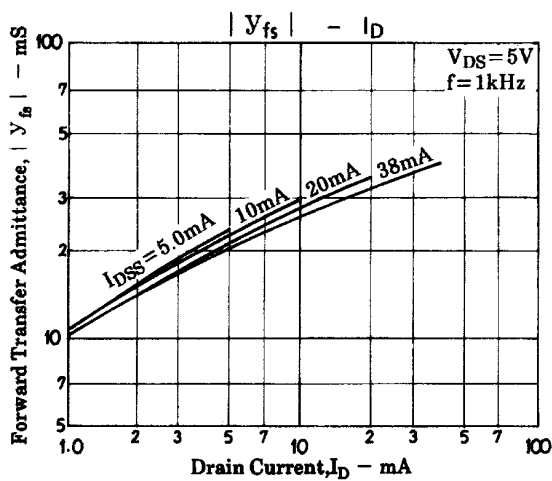
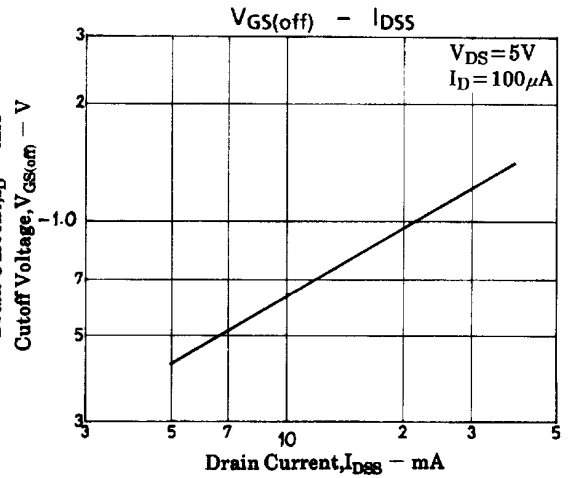
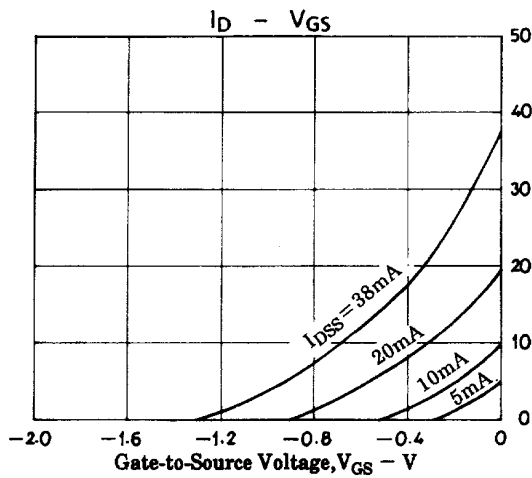
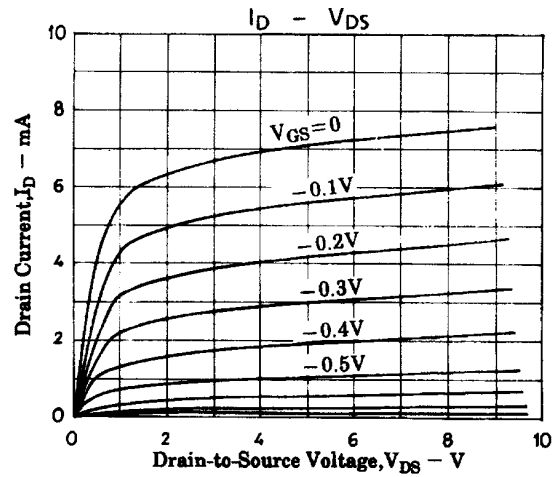
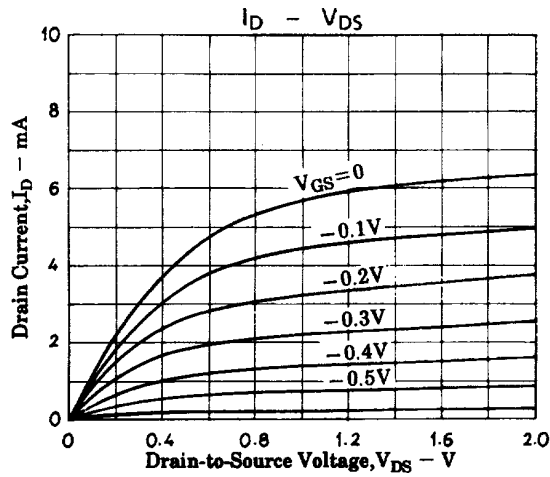
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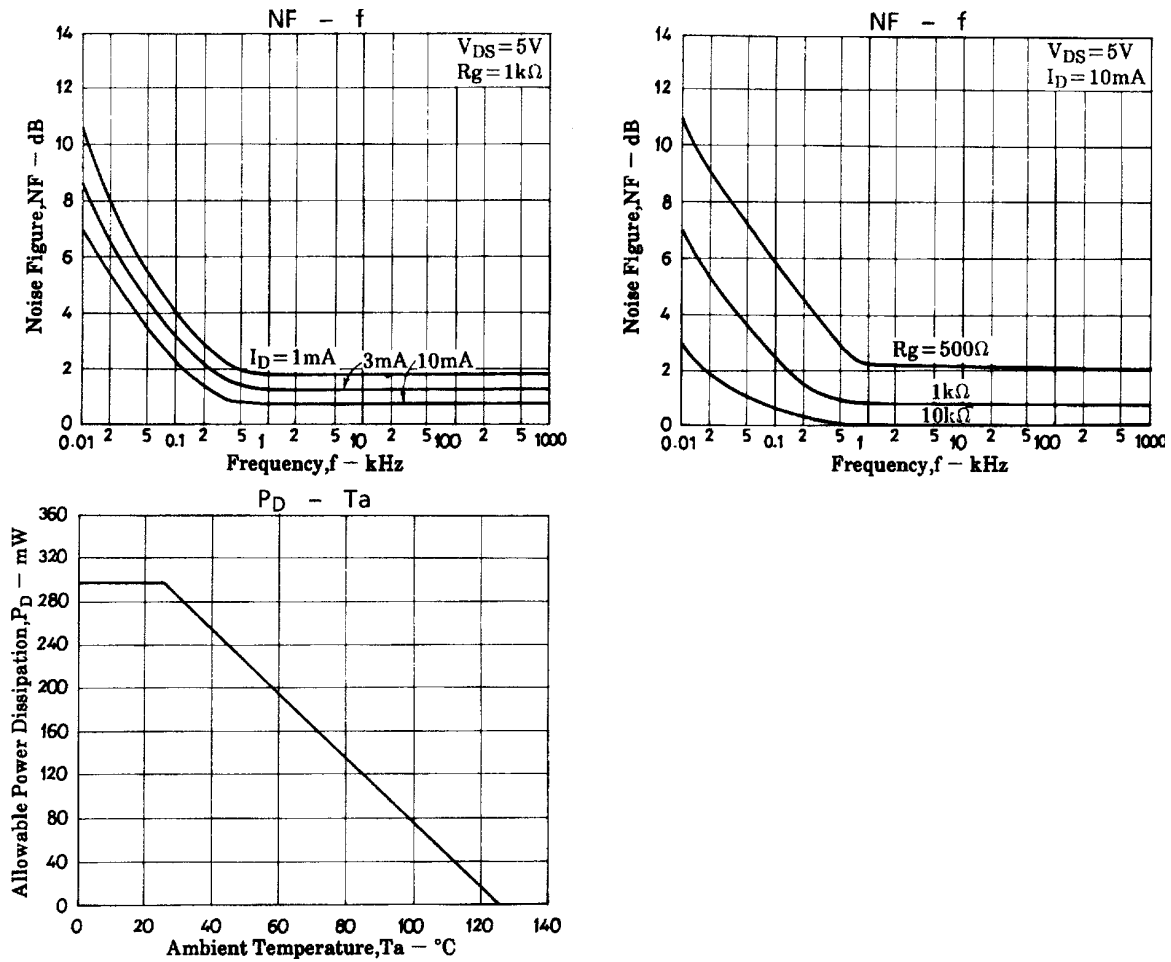
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