



SANYO Semiconductors

## DATA SHEET

# 2SK3946

N-Channel Junction Silicon FET

## Low-Frequency General-Purpose Amplifier, Impedance Converter Applications

### Applications

- Low-frequency general-purpose amplifier, impedance conversion, infrared sensor applications.

### Features

- Small  $I_{GSS}$ .
- Large gm.

### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	$V_{DSX}$		30	V
Gate-to-Drain Voltage	$V_{GDS}$		-30	V
Gate Current	$I_G$		10	mA
Drain Current	$I_D$		10	mA
Allowable Power Dissipation	$P_D$		200	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	$V_{(BR)GDS}$	$I_G=-10\mu\text{A}, V_{DS}=0\text{V}$	-30			V
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS}=-20\text{V}, V_{DS}=0\text{V}$			-1.0	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}, I_D=1\mu\text{A}$	-0.18	-0.7	-1.1	V
Drain Current	$I_{DSS}$	$V_{DS}=10\text{V}, V_{GS}=0\text{V}$	2		7	mA
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10\text{V}, V_{GS}=0\text{V}, f=1\text{kHz}$	7.5	12		mS
Input Capacitance	$C_{iss}$	$V_{DS}=10\text{V}, V_{GS}=0\text{V}, f=1\text{MHz}$		9.5		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS}=10\text{V}, V_{GS}=0\text{V}, f=1\text{MHz}$		2.5		pF

Marking : KF

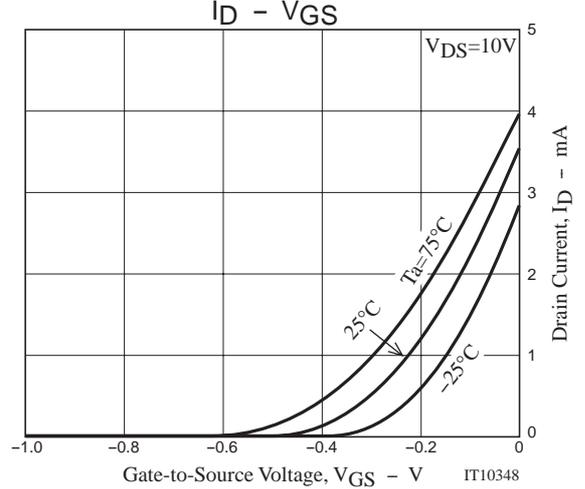
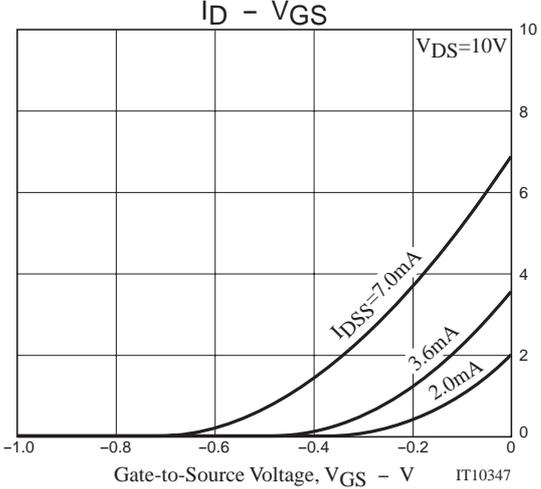
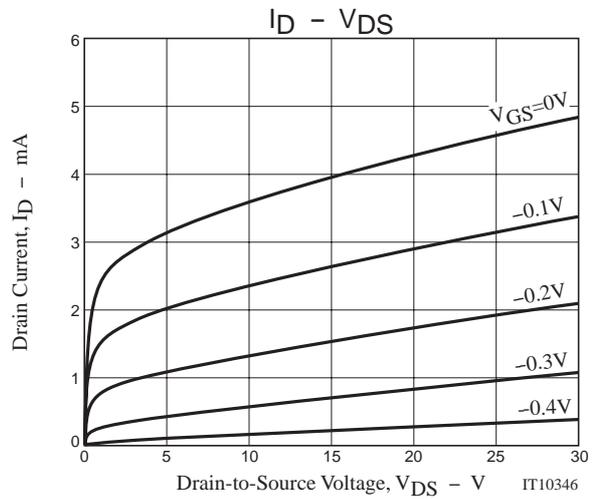
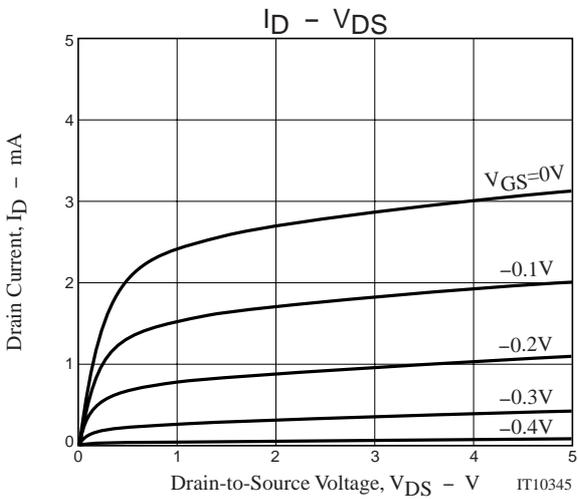
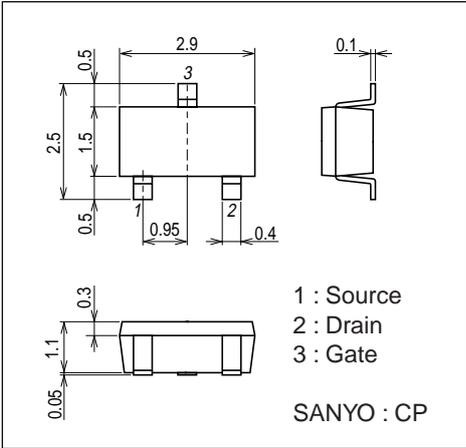
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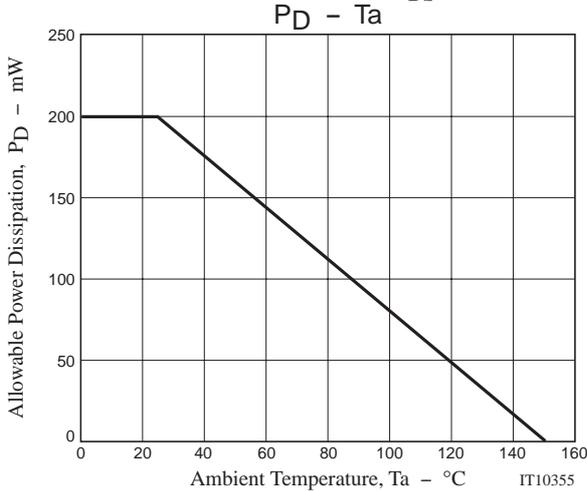
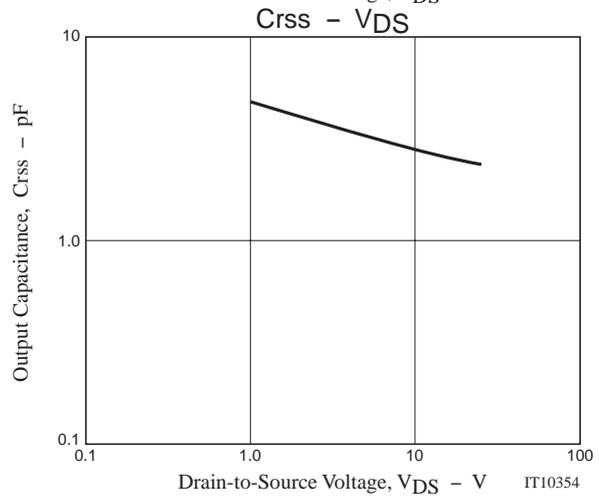
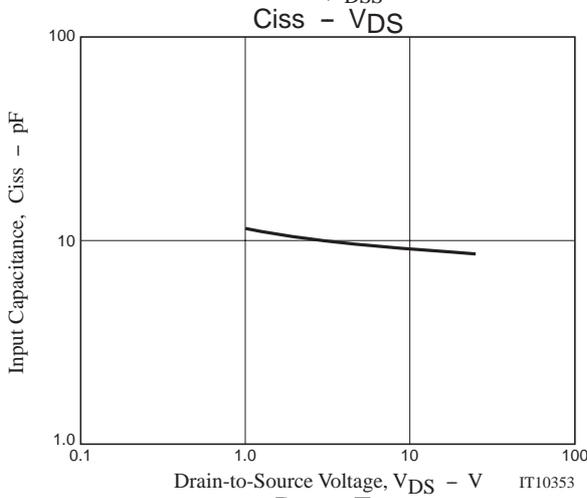
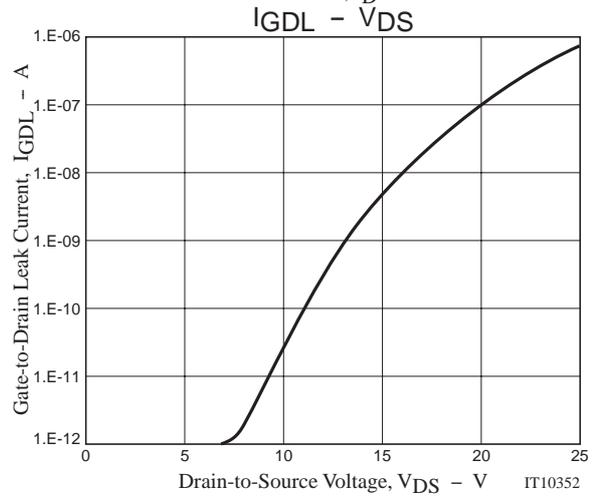
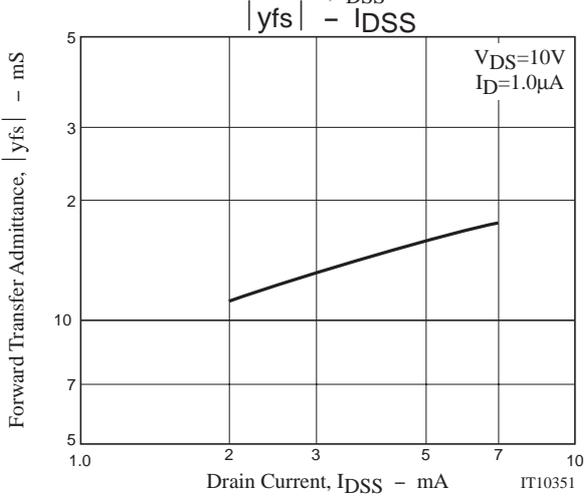
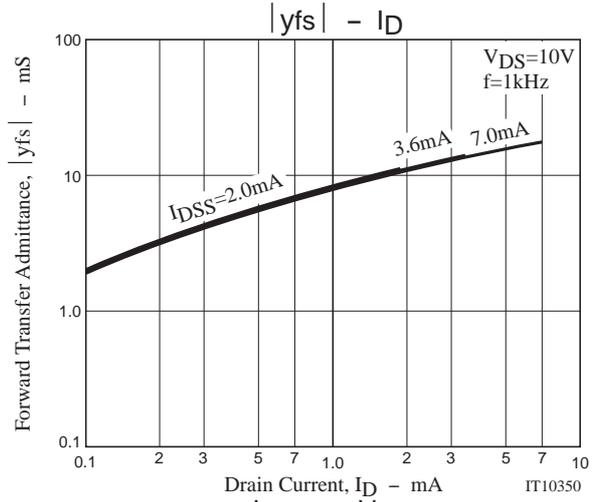
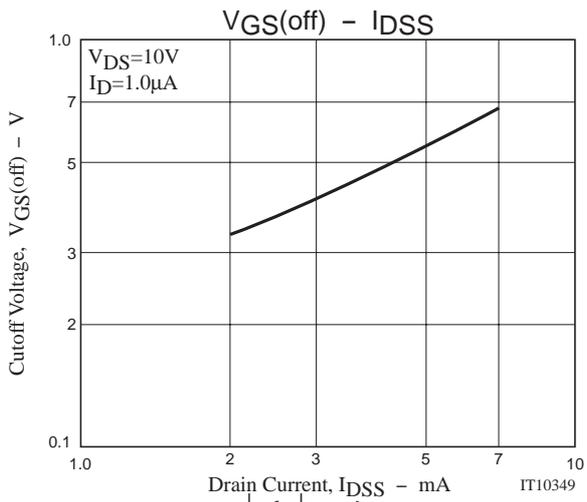
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

Package Dimensions

unit : mm  
7013A-011



# 2SK3946



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