

**2SK2091**

## Impedance Converter Applications

### Applications

- Low-frequency general-purpose amplifier applications.
- Impedance conversion.
- Infrared sensor.

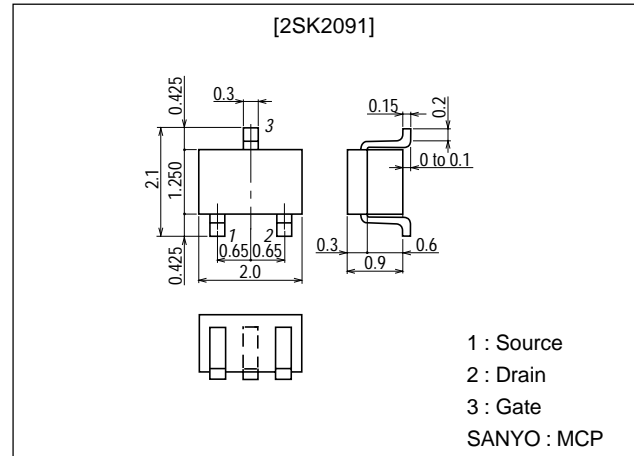
### Features

- Small  $I_{GSS}$ .
- Small  $C_{iss}$ .
- Ultrasmall-sized package permitting 2SK2091-applied sets to be made smaller and slimmer.

### Package Dimensions

unit:mm

2058



### 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	$I_D$		5	mA
Allowable Power Dissipation	$P_D$		150	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	$V_{(BR)GDS}$	$I_G = -10\mu\text{A}$ , $V_{DS} = 0$	-30			V
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 10\text{V}$ , $V_{GS} = 0$	0.4*		1.1*	mA
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS} = -20\text{V}$ , $V_{DS} = 0$			-1.0	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10\text{V}$ , $I_D = 1\mu\text{A}$	-0.3	-0.75	-1.5	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 10\text{V}$ , $V_{GS} = 0$ , $f = 1\text{kHz}$	1.1	1.8		mS

\* : The 2SK2091 is classified by  $I_{DSS}$  as follows : (unit : mA).

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0.4	14	0.8	0.6	15	1.1
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Note) Marking : H

 $I_{DSS}$  rank : 14, 15

For CP package version, use the 2SK2076.

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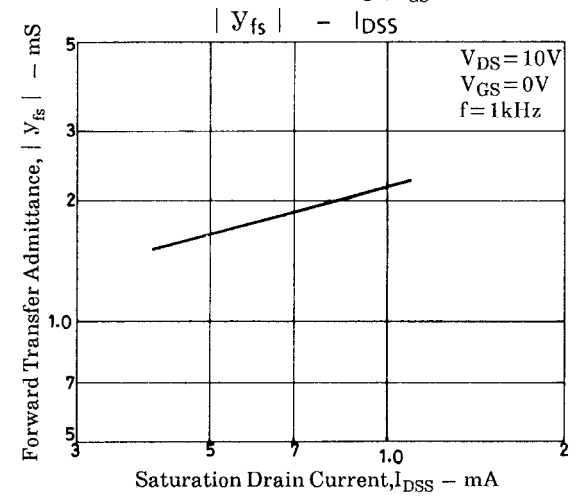
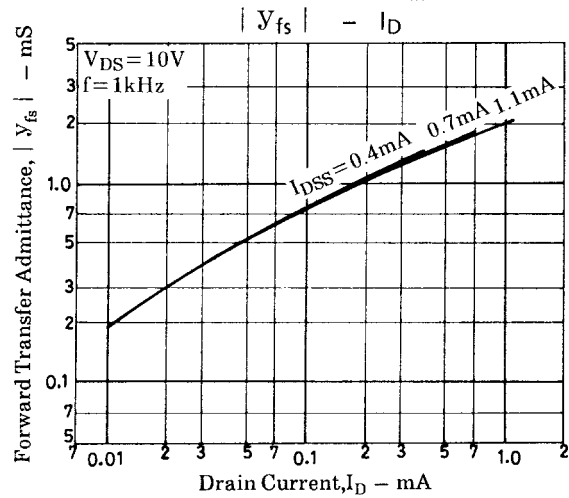
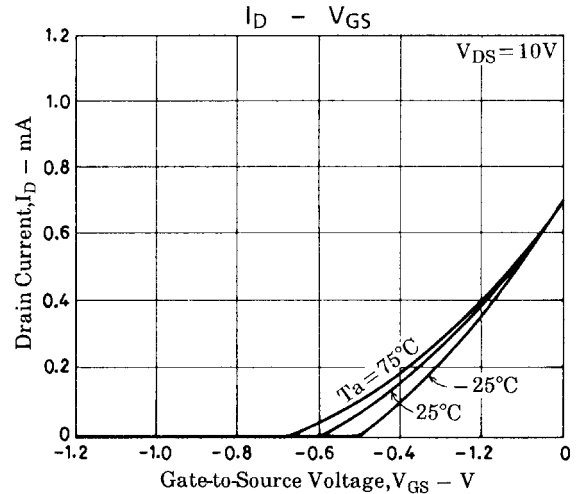
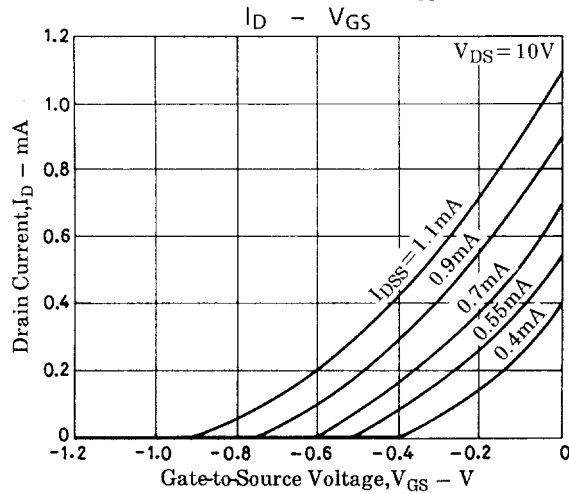
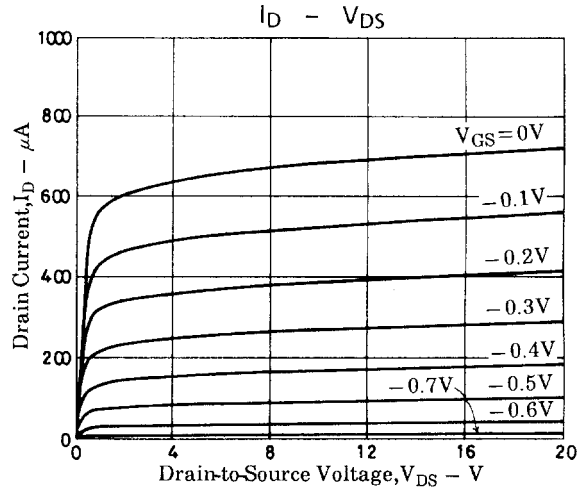
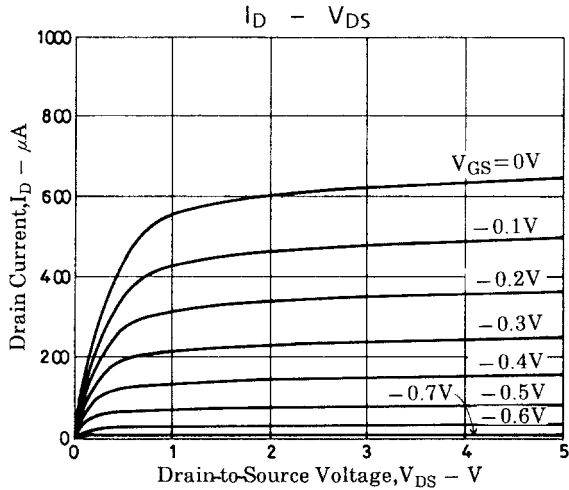
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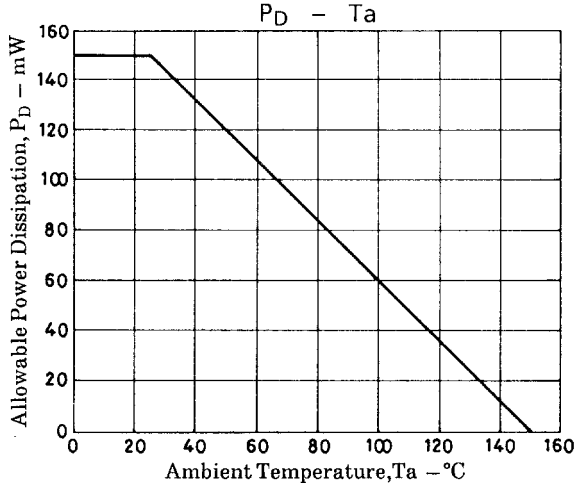
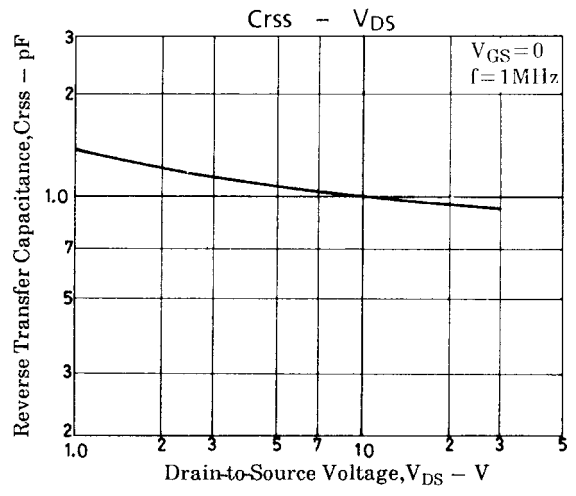
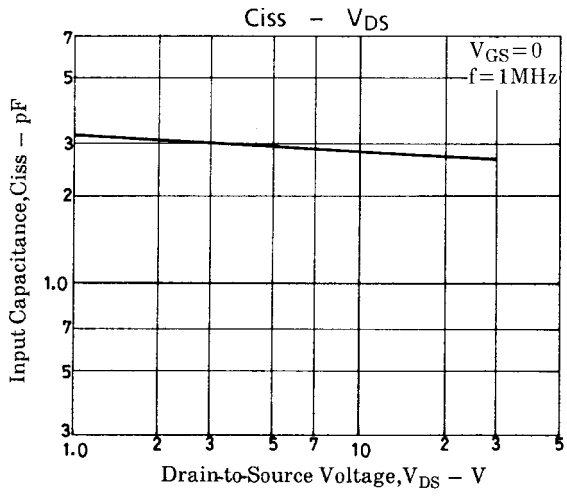
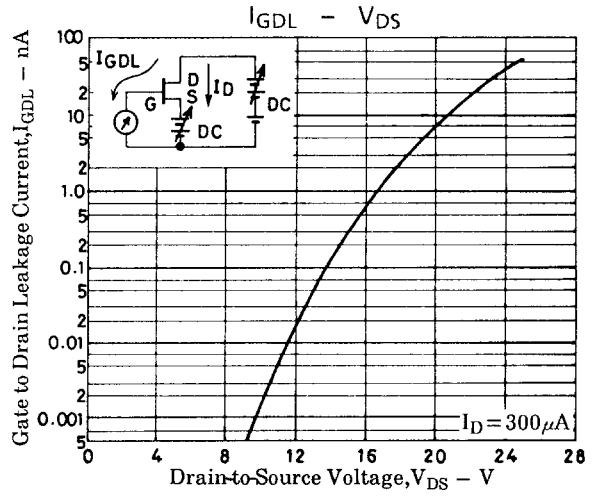
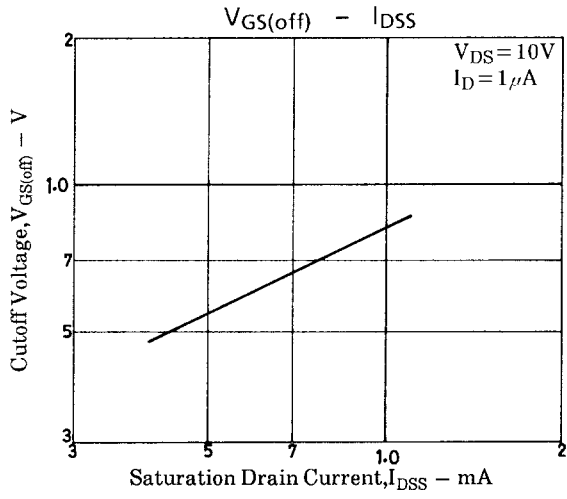
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	$C_{iss}$	$V_{DS}=10V, V_{GS}=0, f=1MHz$		2.9		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS}=10V, V_{GS}=0, f=1MHz$		1.1		pF



# 2SK2091



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