

〈Field-Effect Transistor〉

# 2SK2881

For Low Frequency Amplify Application  
N Channel Junction type Micro(Frame type)

## DESCRIPTION

2SK2880 is a small type resin sealed N channel junction type FET. It is especially designed for low frequency low noise amplify application.

## FEATURE

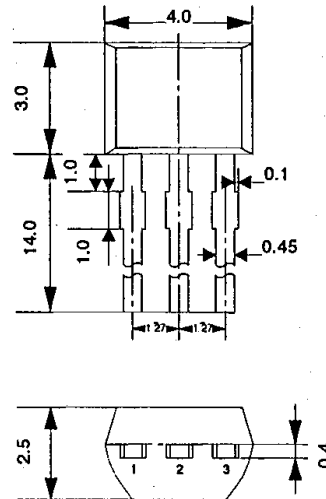
- Low noise figure  $NF=1\text{dB (typ)}$   
( $V_{DS}=10\text{V}$ ,  $I_D=1\text{mA}$ ,  $R_G=1\text{k}\Omega$ ,  $f=100\text{Hz}$ )
- High  $|y_{fs}|$   $|y_{fs}|=8\text{mS (typ)}$   
( $V_{DS}=10\text{V}$ ,  $I_D=1\text{mA}$ ,  $f=1\text{kHz}$ )
- Low  $R_{DS(ON)}$   $R_{DS(ON)}=70\Omega$  (typ)
- High voltage  $V_{GDO}=V_{GSO}=-50\text{V}$

## APPLICATION

Low frequency voltage amplify, analog switch.

OUTLINE DRAWING

UNIT:mm



TERMINAL CONNECTOR

- ① : SOURCE  
② : GATE  
③ : DRAIN

EIAJ : —  
JEDEC : —

## MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )

SYMBOL	PARAMETER	RATINGS	UNIT
$V_{GDO}$	Gate to Drain voltage	-50	V
$V_{GSO}$	Gate to Source voltage	-50	V
$I_D$	Drain current	20	mA
$I_G$	Gate current	10	mA
$P_T$	Total allowable dissipation	450	mW
$T_{ch}$	Channel temperature	+125	$^\circ\text{C}$
$T_{stg}$	Storage temperature	-55to+125	$^\circ\text{C}$

## ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ )

SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
$I_{GSS}$	Gate leakage current	$V_{GS}=-30\text{V}$ , $V_{DS}=0$			1	nA
$I_{DSS} *$	Drain current	$V_{DS}=10\text{V}$ , $V_{GS}=0$	1	4	12	mA
$V_{GS(off)}$	Cut off voltage	$V_{DS}=10\text{V}$ , $I_D=10\mu\text{A}$	-0.1		-3.0	V
$ y_{fs} $	Forward transfer admittance	$V_{DS}=10\text{V}$ , $V_{GS}=0$ , $f=1\text{kHz}$	6.0	15		mS
$ y_{fs} $	Forward transfer admittance	$V_{DS}=10\text{V}$ , $I_D=1\text{mA}$ , $f=1\text{kHz}$		8		mS
$ y_{os} $	Output admittance	$V_{DS}=10\text{V}$ , $V_{GS}=0$ , $f=1\text{kHz}$		10		$\mu\text{S}$
$C_{iss}$	Input capacitance	$V_{DS}=10\text{V}$ , $V_{GS}=0$ , $f=1\text{MHz}$		20		pF
NF	Noise figure	$V_{DS}=10\text{V}$ , $I_D=1\text{mA}$ , $f=100\text{Hz}$ , $R_G=1\text{K}\Omega$		1.0	2.5	dB
$R_{DS(ON)}$	Drain to Source resistor	$V_{DS}=10\text{mVrms}(1\text{kHz})$ , $V_{GS}=0$ , $I_{DSS}=5\text{mA}$		70		$\Omega$

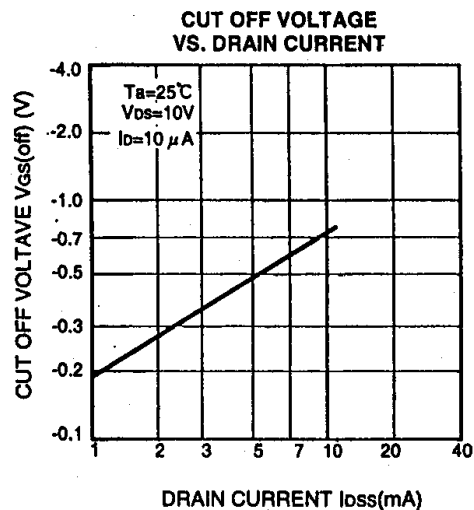
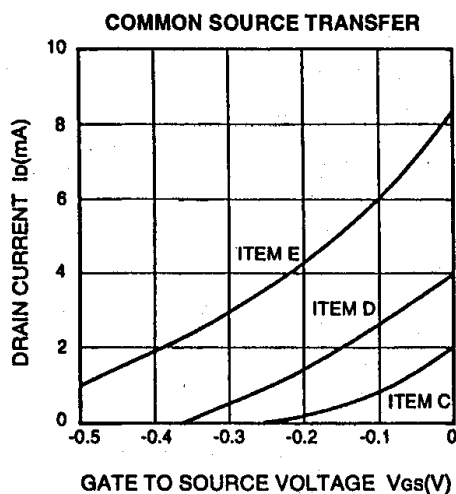
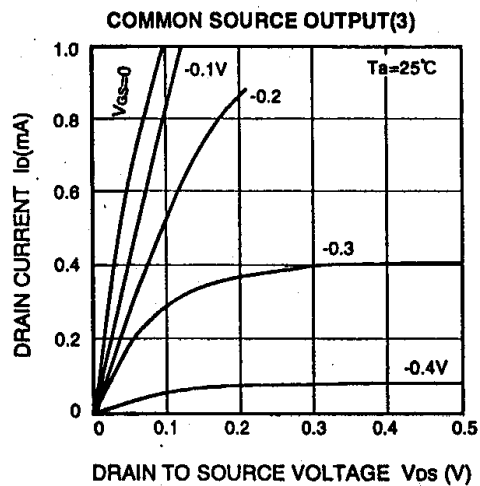
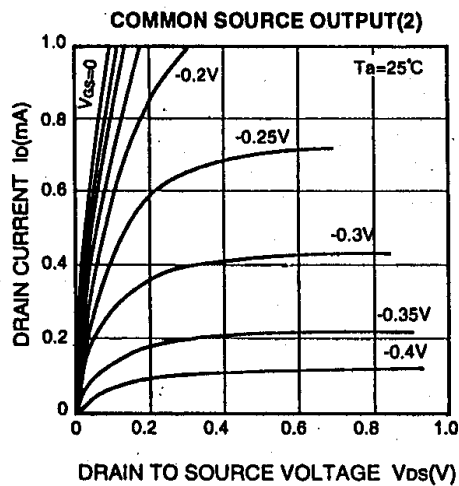
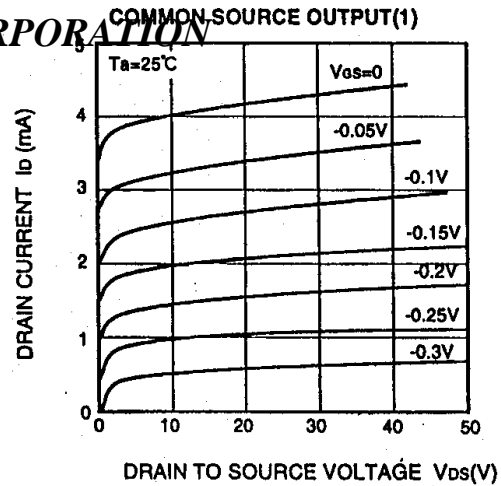
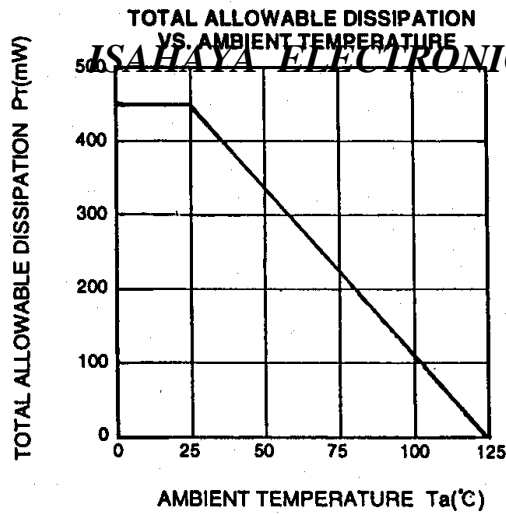
ITEM	C	D	E
$I_{DSS}$	1.0~3.0	2.5~6.0	5.0~12

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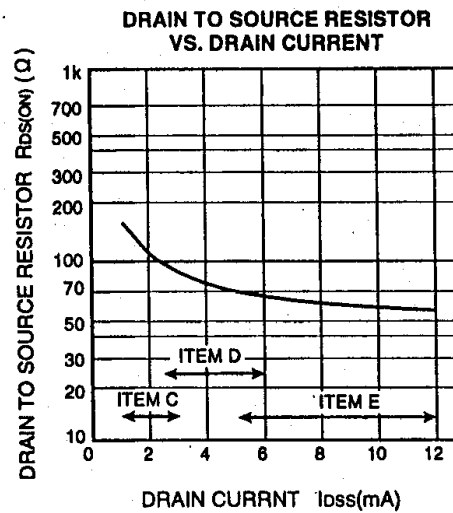
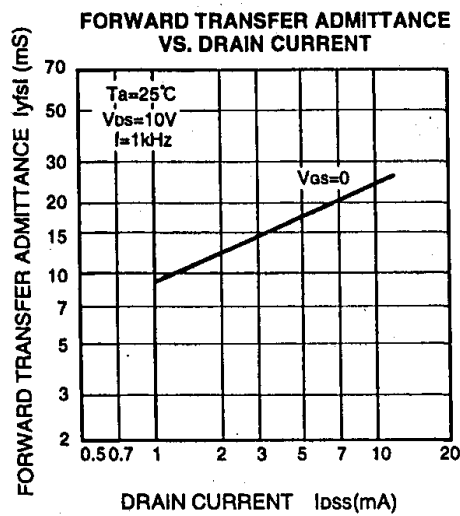
## TYPICAL CHARACTERISTICS



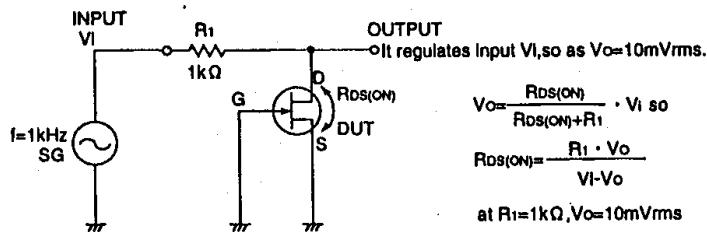
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## DRAIN TO SOURCE RESISTOR $R_{ds(on)}$ TEST CIRCUIT





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