

2SK930

FOR LOW FREQUENCY AMPLIFY APPLICATION
N CHANNEL JUNCTION TYPE

DESCRIPTION

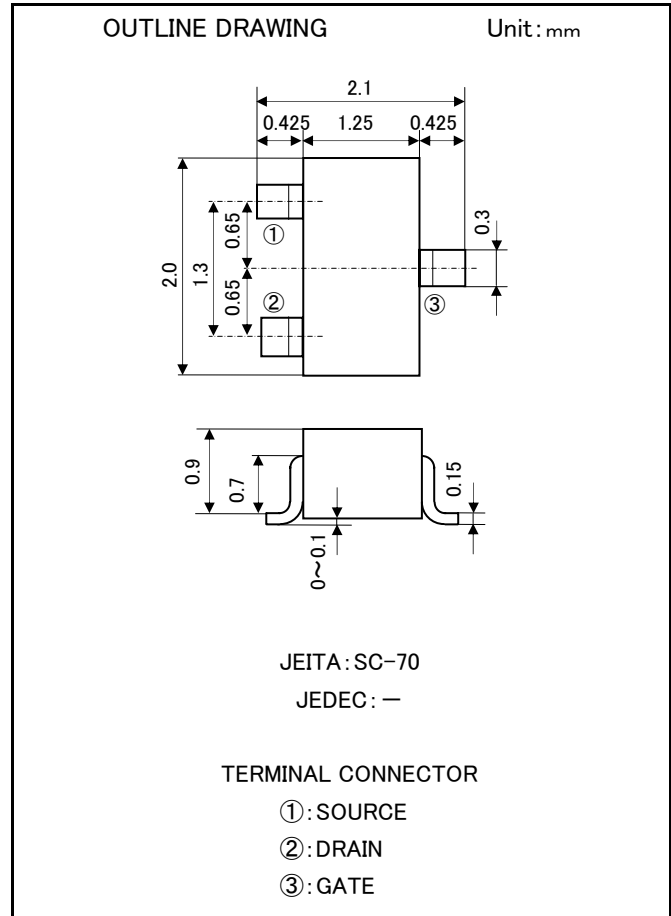
2SK930 is a super mini outline resin sealed N channel junction type FET. It is designed for low frequency voltage amplify, application and analog switch application.

FEATURE

- Small type for mounting.
- High $|y_{fs}|$ $|y_{fs}| = 3\text{mS (typ)}$
- Low $R_{DS(ON)}$ $R_{DS(ON)} = 250\ \Omega$ (typ)

APPLYCATION

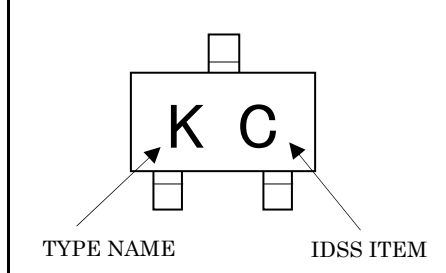
General purpose voltage amplify, analog switch circuit for stereo, cassette deck, VTR.



MAXIMUN RATINGS (Ta=25°C)

| Symbol | Parameter | Ratings | Unit |
|-----------|-----------------------------|------------|------|
| V_{GD0} | Gate to Drain voltage | -50 | V |
| I_G | Gate current | 10 | mA |
| P_T | Total allowable dissipation | 150 | mW |
| T_{ch} | Channel temperature | +150 | °C |
| T_{stg} | Storage temperature | -55 ~ +150 | °C |

MARKING



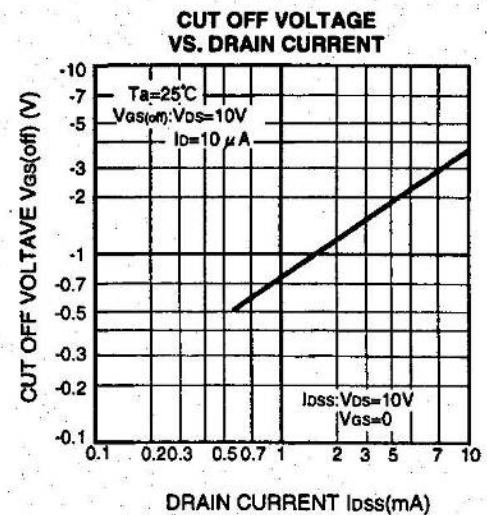
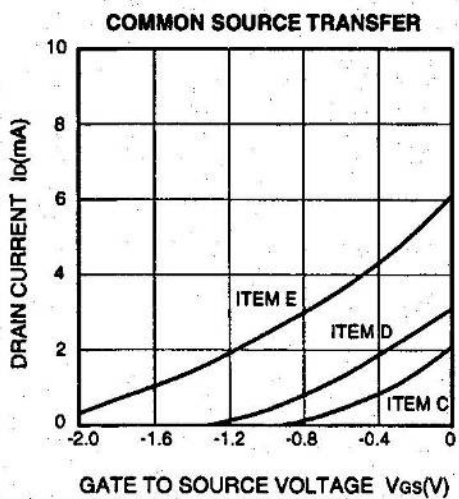
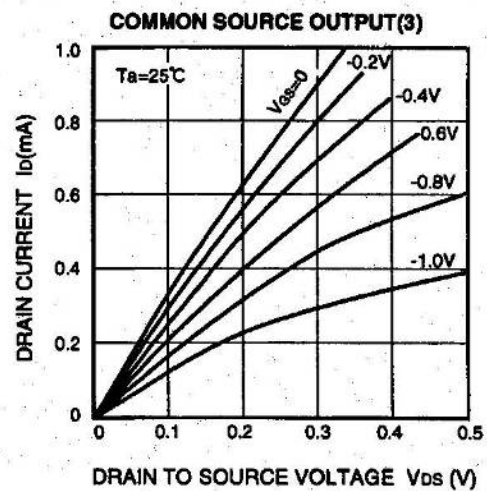
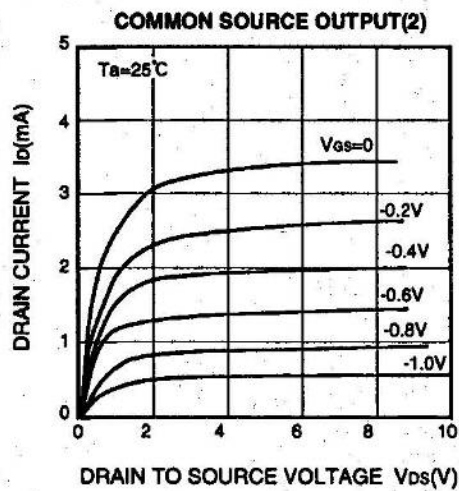
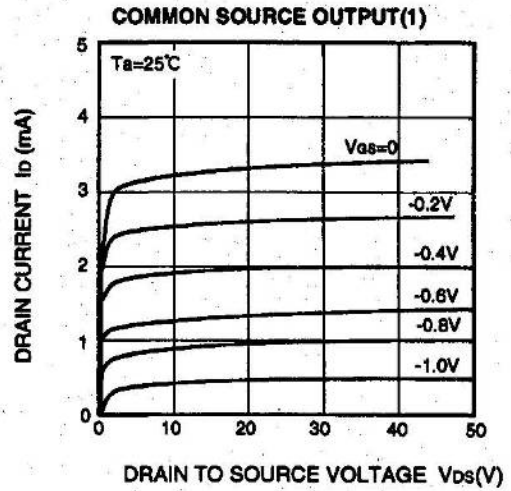
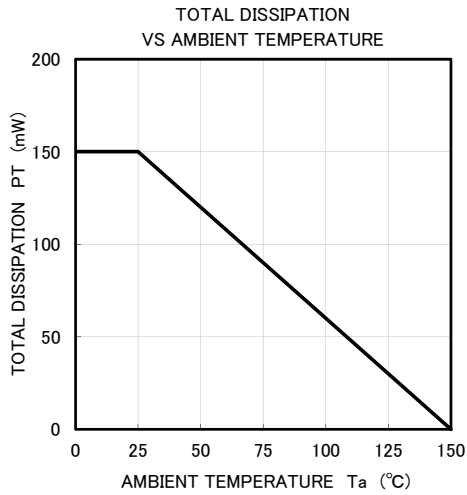
ELECTRICAL CHARACTERISTICS (Ta=25°C)

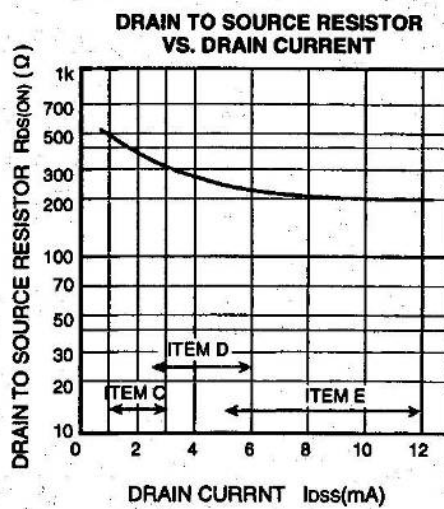
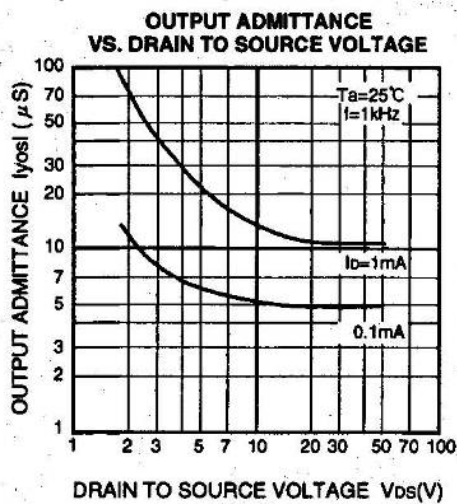
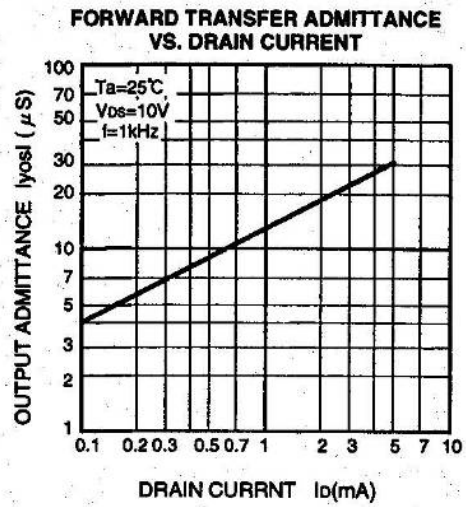
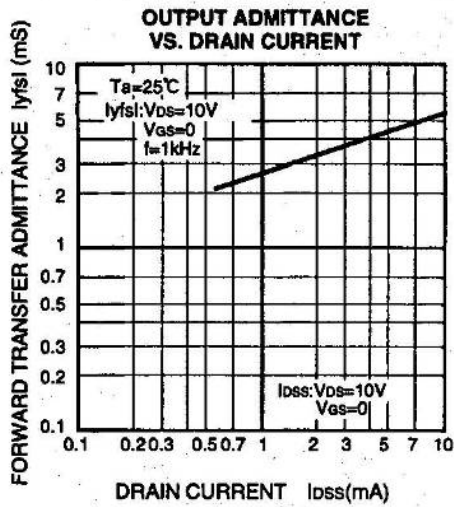
| Symbol | Parameter | Test conditions | Limits | | | Unit |
|---------------|---------------------------------|--|--------|------|------|---------------|
| | | | Min | Typ | Max | |
| $V_{(BR)GD0}$ | Gate to Drain breakdown voltage | $I_G = -10\ \mu\text{A}$, $I_D = 0\text{A}$ | -50 | - | - | V |
| I_{GSS} | Gate leakage current | $V_{GS} = -30\text{V}$, $V_{DS} = 0\text{V}$ | - | - | -1 | nA |
| I_{DSS}^* | Drain current | $V_{DS} = 10\text{V}$, $V_{GS} = 0\text{V}$ | 1.0 | - | 12 | mA |
| $V_{GS(OFF)}$ | Cut off voltage | $V_{DS} = 10\text{V}$, $I_D = 10\ \mu\text{A}$ | -0.3 | -1.5 | -6.0 | V |
| $ y_{fs} $ | Forward transfer admittance | $V_{DS} = 10\text{V}$, $V_{GS} = 0\text{V}$, $f = 1\text{kHz}$ | 1.0 | 3.0 | - | mS |
| $ y_{os} $ | Output admittance | $V_{DS} = 10\text{V}$, $V_{GS} = 0\text{V}$, $f = 1\text{kHz}$ | - | 10 | - | μS |
| C_{iss} | Input capacitance | $V_{DS} = 10\text{V}$, $V_{GS} = 0\text{V}$, $f = 1\text{MHz}$ | - | 8 | - | pF |
| C_{rss} | Feedback capacitance | $V_{DS} = 10\text{V}$, $V_{GS} = 0\text{V}$, $f = 1\text{MHz}$ | - | 1.5 | - | pF |
| $R_{DS(ON)}$ | Drain to Source resistor | $V_{DS} = 10\text{mVrms (1kHz)}$, $V_{GS} = 0\text{V}$, $I_{DSS} = 5\text{mA}$ | - | 250 | - | Ω |

* : It shows IDSS classification in right table.

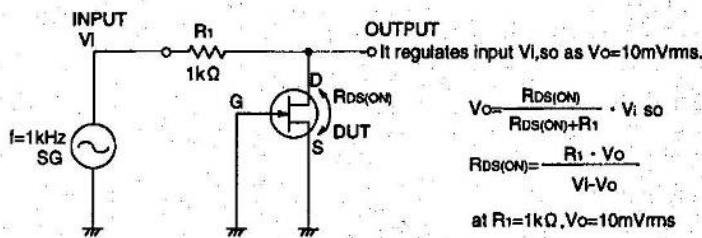
| ITEM | C | D | E |
|----------------------|-----------|-----------|----------|
| $I_{DSS}(\text{mA})$ | 1.0 ~ 3.0 | 2.5 ~ 6.0 | 5.0 ~ 12 |

TYPICAL CHARACTERISTICS





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





Keep safety first in your circuit designs!

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