

# 2SK3372G

## Silicon N-Channel Junction FET

For impedance conversion in low frequency

For electret capacitor microphone

### ■ Features

- High mutual conductance  $g_m$
- Low noise voltage NV

### ■ Package

- Code  
SSSMINI3-F2

### • Pin Name

- 1: Drain
- 2: Source
- 3: Gate

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

| Parameter                        | Symbol    | Rating      | Unit             |
|----------------------------------|-----------|-------------|------------------|
| Drain-source voltage (Gate open) | $V_{DSO}$ | 20          | V                |
| Gate-drain voltage (Source open) | $V_{GDO}$ | 20          | V                |
| Drain-source current (Gate open) | $I_{DSO}$ | 2           | mA               |
| Gate-drain current (Source open) | $I_{GDO}$ | 2           | mA               |
| Gate-source current (Drain open) | $I_{GSO}$ | 2           | mA               |
| Power dissipation                | $P_D$     | 100         | mW               |
| Operating ambient temperature    | $T_{opr}$ | -20 to +80  | $^\circ\text{C}$ |
| Storage temperature              | $T_{stg}$ | -55 to +125 | $^\circ\text{C}$ |

### ■ Marking Symbol: 1H

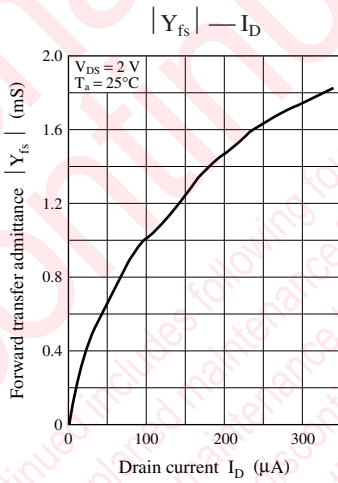
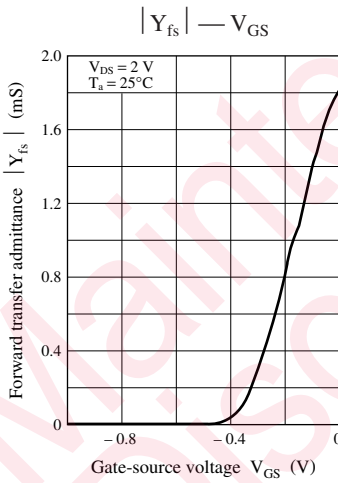
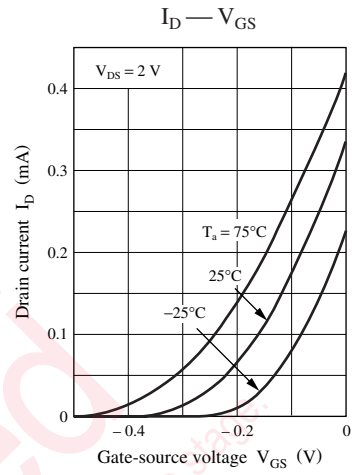
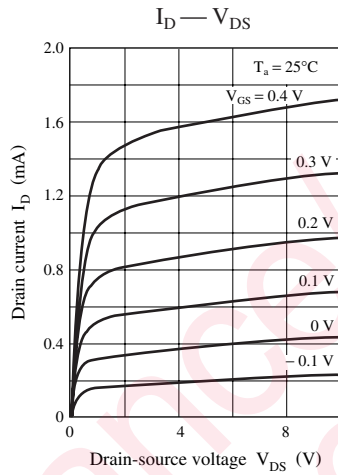
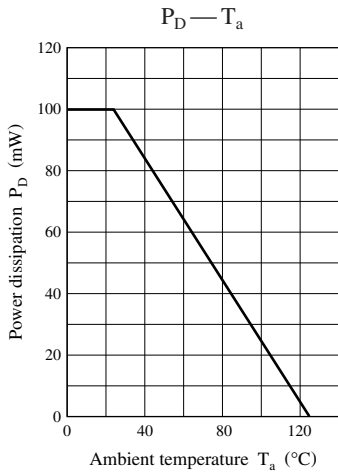
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

| Parameter               | Symbol                    | Conditions  | Min  | Typ  | Max | Unit          |
|-------------------------|---------------------------|---|------|------|-----|---------------|
| Drain current *1        | $I_D$                     | $V_{DS} = 2.0\text{ V}$ , $R_D = 2.2\text{ k}\Omega \pm 1\%$  | 100  |      | 470 | $\mu\text{A}$ |
| Drain-source current    | $I_{DSS}$                 | $V_{DS} = 2.0\text{ V}$ , $R_D = 2.2\text{ k}\Omega \pm 1\%$ , $V_{GS} = 0$   | 107  |      | 460 | $\mu\text{A}$ |
| Mutual conductance      | $g_m$                     | $V_D = 2.0\text{ V}$ , $V_{GS} = 0$ , $f = 1\text{ kHz}$  | 660  | 1600 |     | $\mu\text{S}$ |
| Noise voltage           | NV                        | $V_D = 2.0\text{ V}$ , $R_D = 2.2\text{ k}\Omega \pm 1\%$<br>$C_O = 5\text{ pF}$ , A-Curve  |      |      | 4   | $\mu\text{V}$ |
| Voltage gain            | $G_{V1}$                  | $V_D = 2.0\text{ V}$ , $R_D = 2.2\text{ k}\Omega \pm 1\%$<br>$C_O = 5\text{ pF}$ , $e_G = 10\text{ mV}$ , $f = 1\text{ kHz}$                  | -7.5 | -4.7 |     | dB            |
|                         | $G_{V2}$                  | $V_D = 12\text{ V}$ , $R_D = 2.2\text{ k}\Omega \pm 1\%$<br>$C_O = 5\text{ pF}$ , $e_G = 10\text{ mV}$ , $f = 1\text{ kHz}$                   | -4.0 | -1.5 |     |               |
|                         | $G_{V3}$                  | $V_D = 1.5\text{ V}$ , $R_D = 2.2\text{ k}\Omega \pm 1\%$<br>$C_O = 5\text{ pF}$ , $e_G = 10\text{ mV}$ , $f = 1\text{ kHz}$                  | -8.0 | -5.0 |     |               |
|                         | $\Delta  G_V \cdot f $ *2 | $V_D = 2.0\text{ V}$ , $R_D = 2.2\text{ k}\Omega \pm 1\%$<br>$C_O = 5\text{ pF}$ , $e_G = 10\text{ mV}$ , $f = 1\text{ kHz to } 70\text{ Hz}$ |      | 0    | 1.7 |               |
| Voltage gain difference | $ G_{V2} - G_{V1} $       |   | 0    |      | 4.0 | dB            |
|                         | $ G_{V1} - G_{V3} $       |   | 0    |      | 1.7 |               |

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

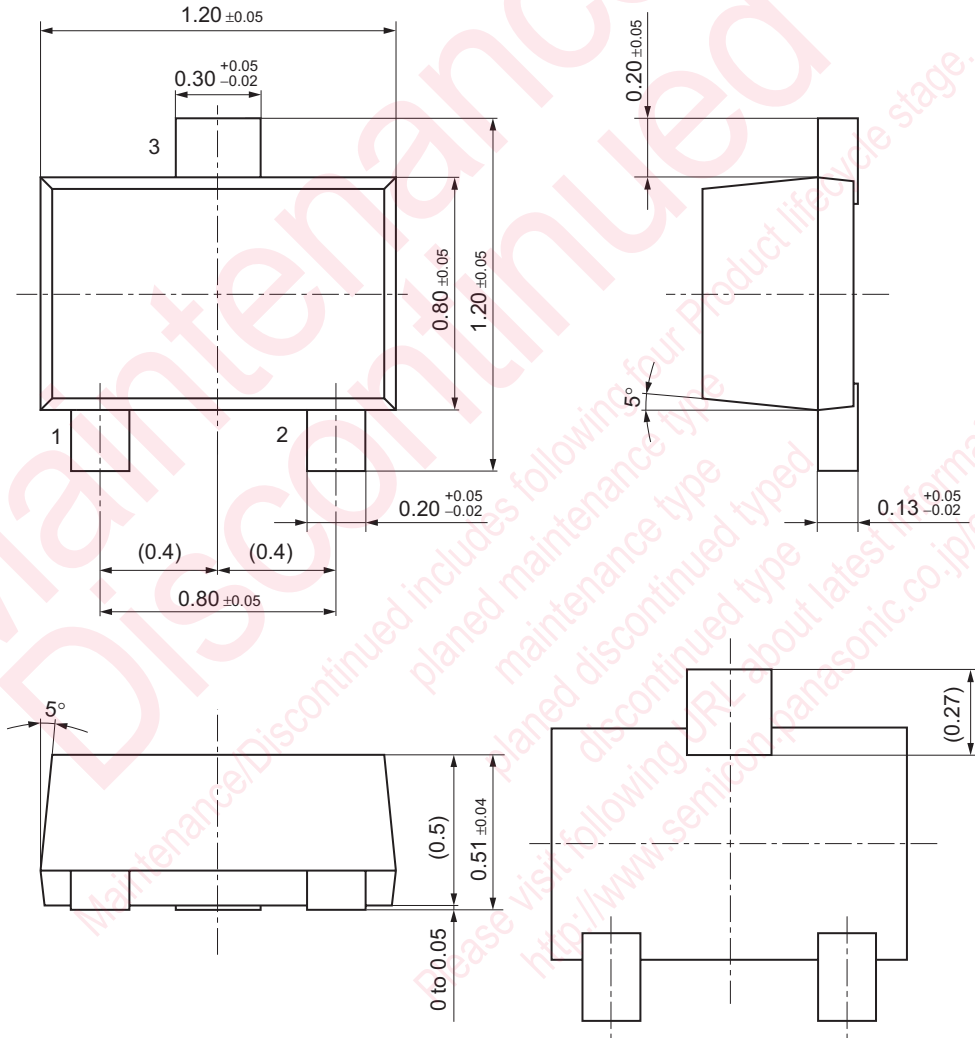
2. \*1:  $I_D$  is assured for  $I_{DSS}$ .

\*2:  $\Delta |G_V \cdot f|$  is assured for AQL 0.065%. (The measurement method is used by source-grounded circuit.)



SSSMini3-F2

Unit: mm



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