

To our customers,

Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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2SK160, 2SK160A

AF & RF AMPLIFIER
N-CHANNEL SILICON JUNCTION FIELD EFFECT TRANSISTOR
MINI MOLD

DESCRIPTION

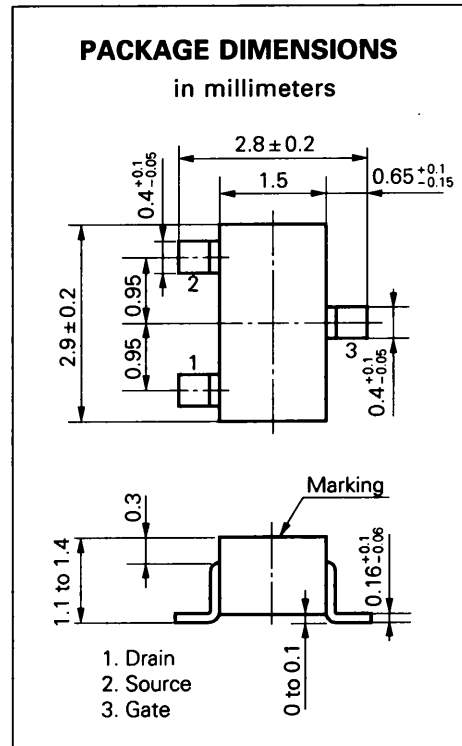
The 2SK160, 2SK160A are designed for hybrid IC which is designed for use in analog-switch, variable-resistor, FR amplifier and AF amplifier.

FEATURE

- Micro package.

ABSOLUTE MAXIMUM RATINGS (TA = 25 °C)

| Maximum Voltages and Currents | 2SK160 | 2SK160A | |
|--|------------------|-------------|-------|
| Gate to Drain Voltage | V _{GDO} | -30 | -50 V |
| Gate to Source Voltage | V _{GSO} | -30 | -50 V |
| Drain to Source Voltage (V _{GS} = -5.0 V) | V _{DSS} | 30 | V |
| Drain Current | I _D | 20 | mA |
| Gate Current | I _G | 10 | mA |
| Maximum Power Dissipation (TA = 25 °C) | | | |
| Total Power Dissipation | P _T | 150 | mW |
| Maximum Temperature | | | |
| Storage Temperature | T _{stg} | -55 to +125 | °C |
| Junction Temperature | T _j | 125 | °C |



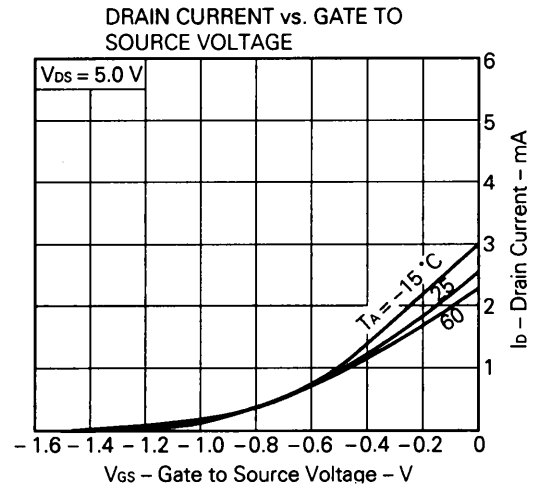
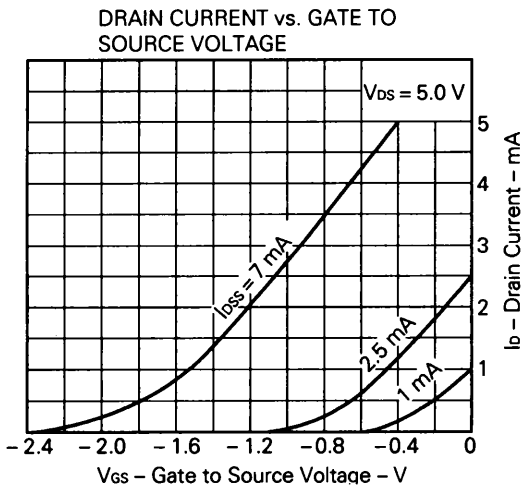
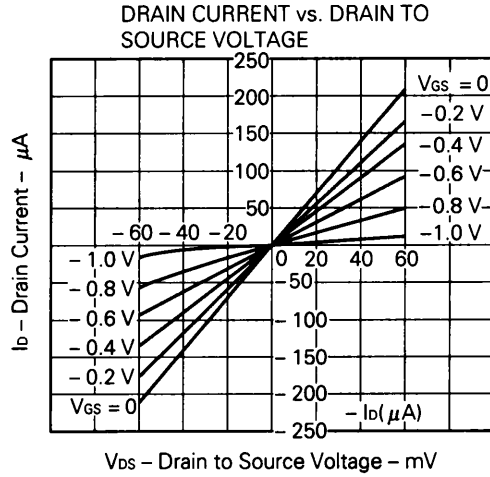
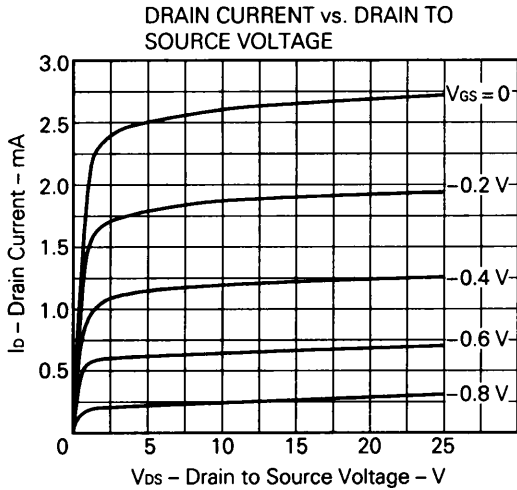
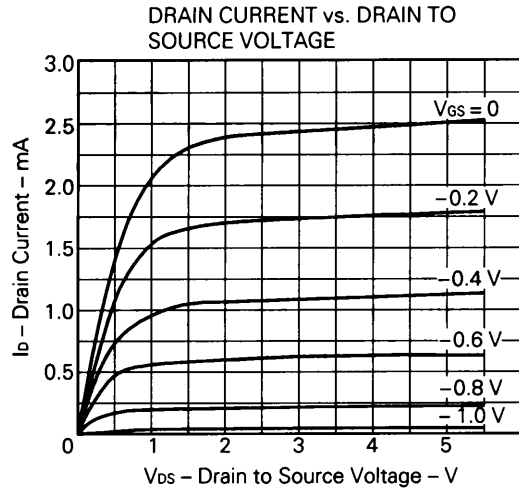
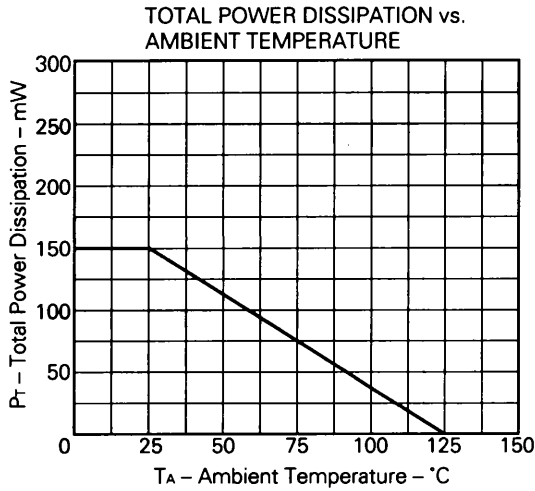
ELECTRICAL CHARACTERISTICS (TA = 25 °C)

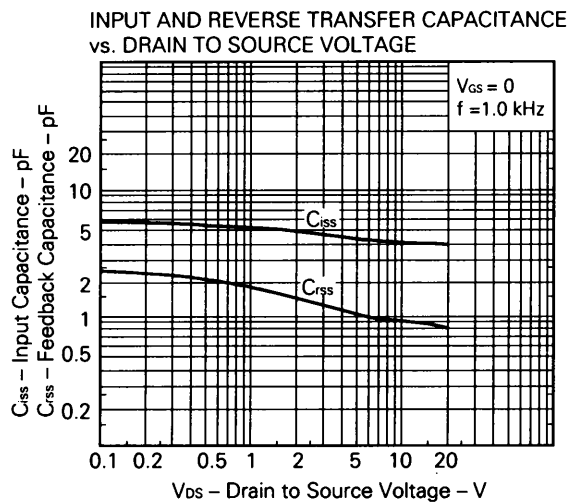
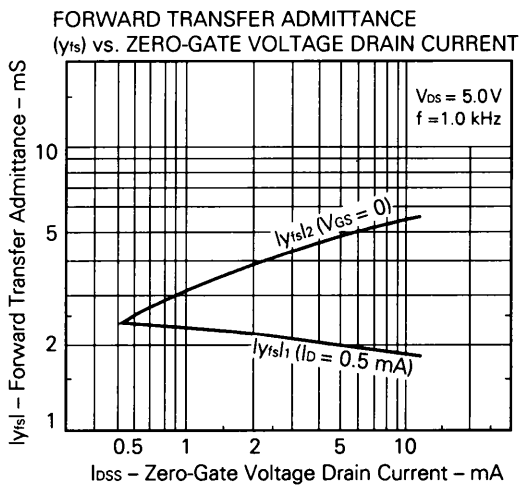
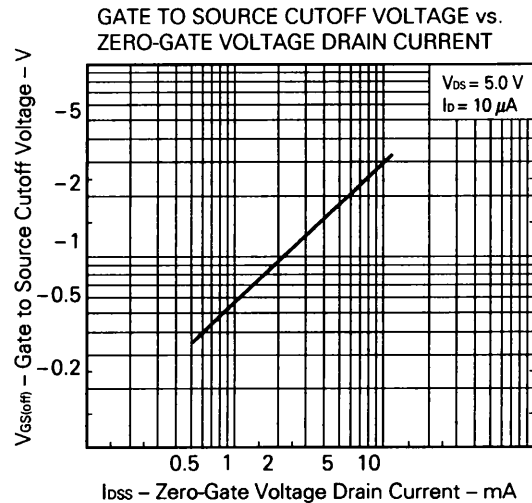
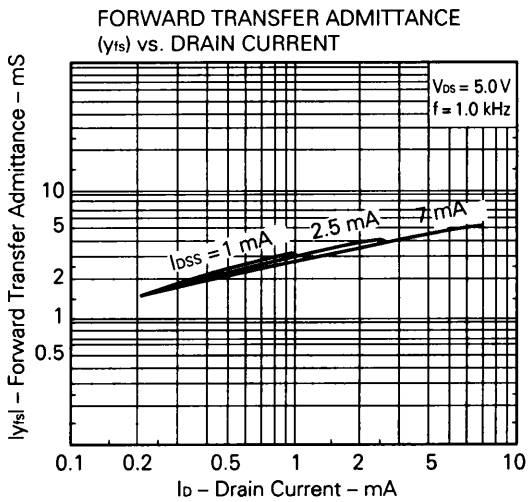
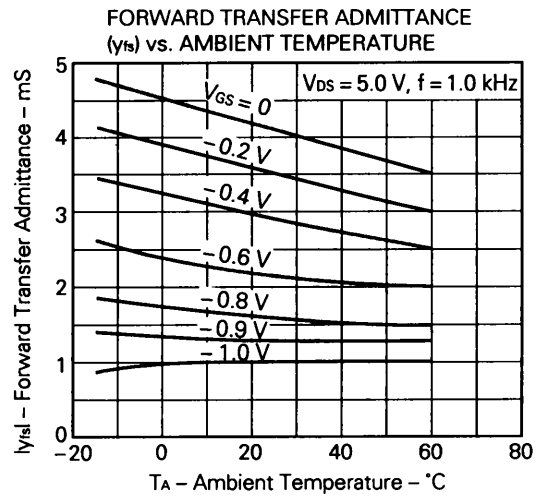
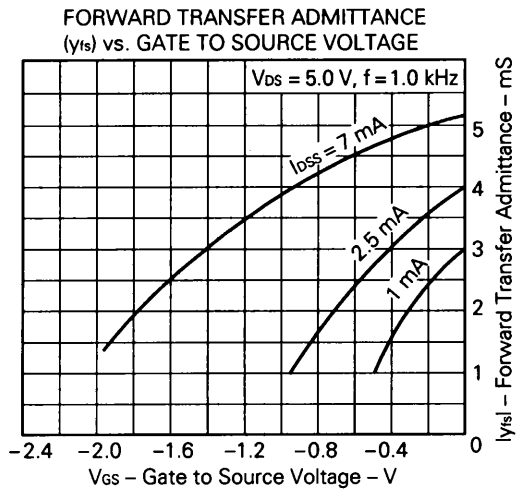
| CHARACTERISTIC | SYMBOL | MIN. | TYP. | MAX. | UNIT | TEST CONDITION | |
|---------------------------------|--------------------------------|-------|------|------|------|---|--|
| Gate Cutoff Current | I _{gss} | | | -10 | nA | 2SK160 | V _{GS} = -30 V, V _{DS} = 0 |
| | | | | -1 | nA | 2SK160A | |
| Zero-Gate Voltage Drain Current | I _{DSS} | 0.5 | 2.5 | 12 | mA | V _{DS} = 5.0 V, V _{GS} = 0 | |
| Gate to Source Cutoff Voltage | V _{GS(off)} | -0.25 | -1.1 | -4.5 | V | V _{DS} = 5.0 V, I _D = 10 μA | |
| Forward Transfer Admittance | y _{fs} ₁ | 1.5 | 2.1 | | mS | V _{DS} = 5.0 V, I _D = 0.5 mA, f = 1.0 kHz | |
| Forward Transfer Admittance | y _{fs} ₂ | 1.5 | 4.1 | | mS | V _{DS} = 5.0 V, V _{GS} = 0, f = 1.0 kHz | |
| Input Capacitance | C _{iss} | | 4.1 | | pF | V _{DS} = 10 V, V _{GS} = 0, f = 1.0 MHz | |
| Feedback Capacitance | C _{rss} | | 0.9 | | pF | V _{DS} = 10 V, V _{GS} = 0, f = 1.0 MHz | |

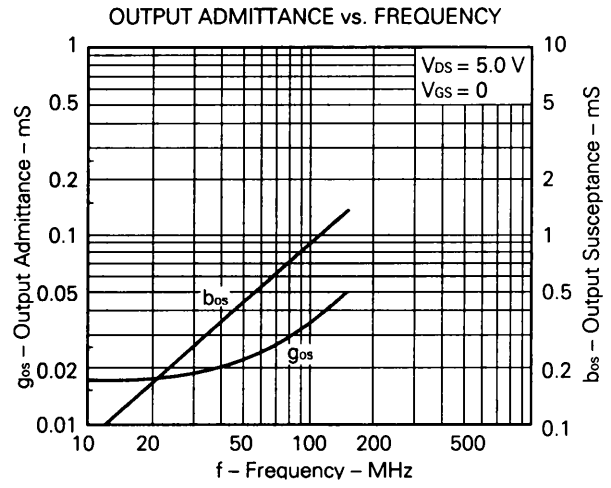
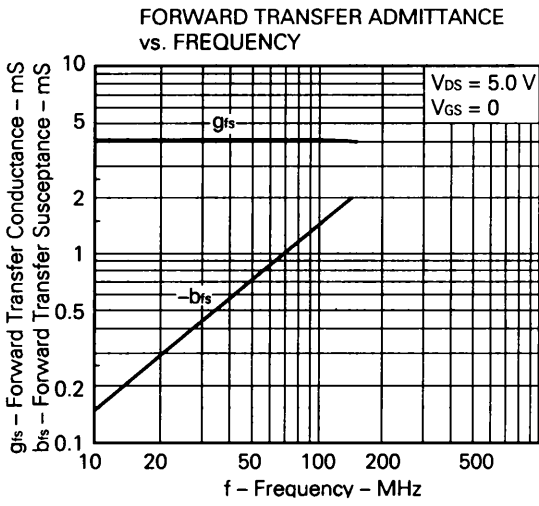
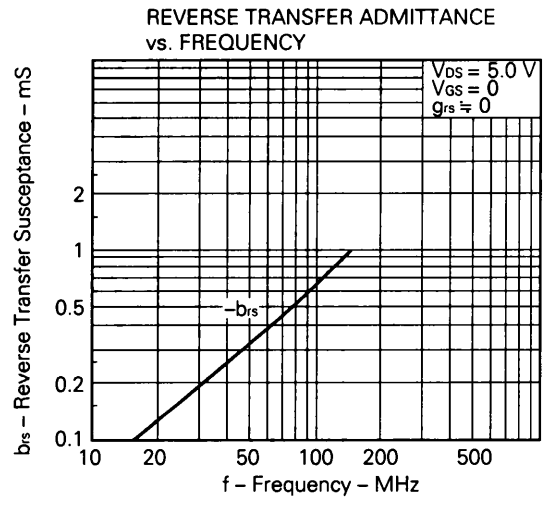
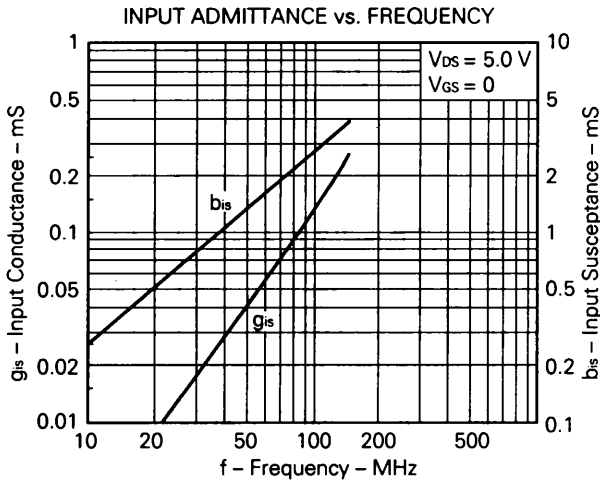
I_{DSS} Classification

| Marking | 2SK160 | K4 | K5 | K6 | K7 |
|-----------------------|------------|------------|------------|-----------|-----|
| | 2SK160A | K24 | K25 | K26 | K27 |
| I _{DSS} (mA) | 0.5 to 1.5 | 1.0 to 3.0 | 2.0 to 6.0 | 4.0 to 12 | |

TYPICAL CHARACTERISTICS (T_A = 25 °C)







[MEMO]

[MEMO]

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Standard: Computers, office equipment, communications equipment, test and measurement equipment, audio and visual equipment, home electronic appliances, machine tools, personal electronic equipment and industrial robots

Special: Transportation equipment (automobiles, trains, ships, etc.), traffic control systems, anti-disaster systems, anti-crime systems, safety equipment and medical equipment (not specifically designed for life support)

Specific: Aircrafts, aerospace equipment, submersible repeaters, nuclear reactor control systems, life support systems or medical equipment for life support, etc.

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Anti-radioactive design is not implemented in this product.