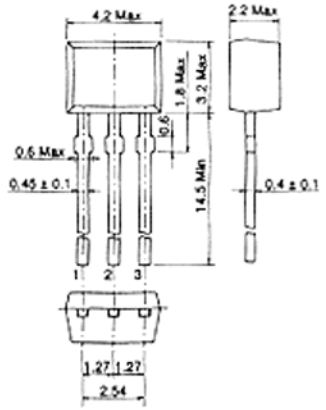
HITACHI

查询"2SK521"供应商

# 2SK521

SILICON N-CHANNEL JUNCTION FET

VHF AMPLIFIER, MIXER, LOCAL OSCILLATOR




(SPAK)

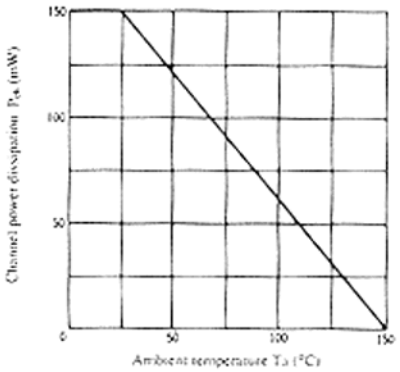
1. Gate
2. Source
3. Drain

(Dimensions in mm)

## ■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

| Item | Symbol | 2SK521 | Unit |
|---|---|---|---|
| Gate to drain voltage | $V_{GDO}$ | −18 | V |
| Gate current | $I_G$ | 10 | mA |
| Drain current | $I_D$ | 20 | mA |
| Channel power dissipation | $P_{ch}$ | 150 | mW |
| Channel temperature | $T_{ch}$ | 150 | °C |
| Storage temperature | $T_{stg}$ | −55 to +150 | °C |

MAXIMUM CHANNEL DISSIPATION CURVE



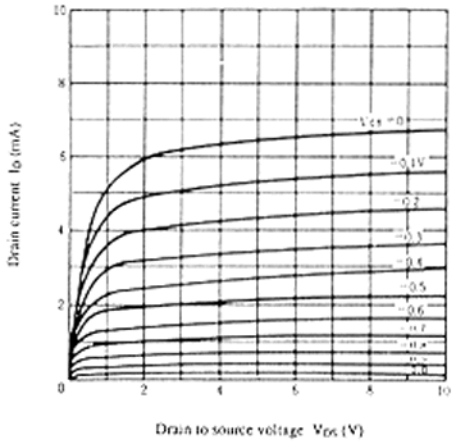

## ■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

| Item | Symbol | Test Condition | min. | typ. | max. | Unit |
|---|---|---|---|---|---|---|
| Gate to drain breakdown voltage | $V_{(BR)GDO}$ | $I_G$ = −100μA, $I_S$ = 0 | −18 | — | — | V |
| Gate cutoff current | $I_{GSS}$ | $V_{GS}$ = −0.5V, $V_{DS}$ = 0 | — | — | −10 | nA |
| Drain current | $I_{DSS}$* | $V_{DS}$ = 10V, $V_{GS}$ = 0 | 2 | — | 14 | mA |
| Gate to source cutoff voltage | $V_{GS(off)}$ | $V_{DS}$ = 10V, $I_D$ = 10μA | −0.3 | — | −5.5 | V |
| Forward transfer admittance | $\|y_{fs}\|$ | $V_{DS}$ = 10V, $V_{GS}$ = 0, $f$ = 1kHz | 3 | 8 | — | mS |
| Input capacitance | $C_{iss}$ | $V_{DS}$ = 10V, $V_{GS}$ = 0, $f$ = 1MHz | — | 3 | — | pF |
| Reverse transfer capacitance | $C_{rss}$ | | — | 0.4 | 0.6 | pF |
| Power gain | PG | $V_{DD}$ = 10V, $R_S$ = 33Ω, $f$ = 100MHz | — | 18 | — | dB |
| Noise figure | NF | | — | 2 | 3.5 | dB |

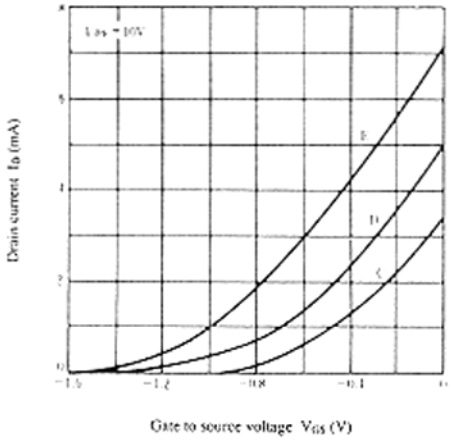
* The 2SK521 is grouped by $I_{DSS}$ as follows.

| C | D | E |
|---|---|---|
| 2 to 5 | 3 to 7 | 6 to 14 |

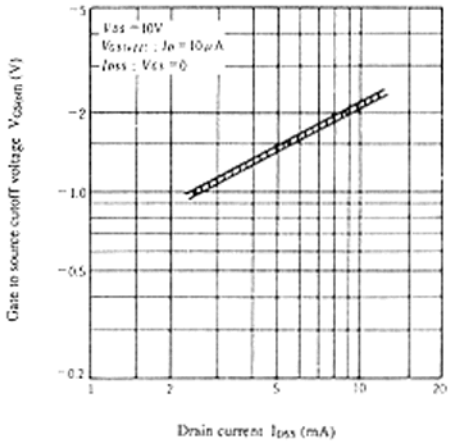
TYPICAL OUTPUT CHARACTERISTICS



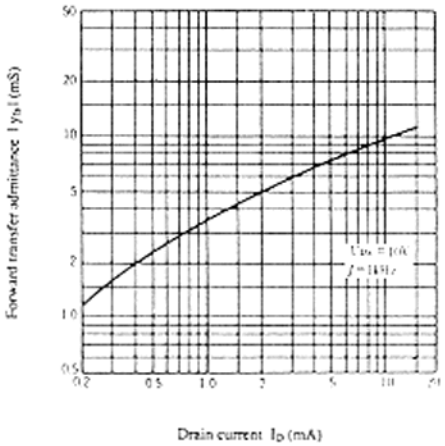

TYPICAL TRANSFER CHARACTERISTICS



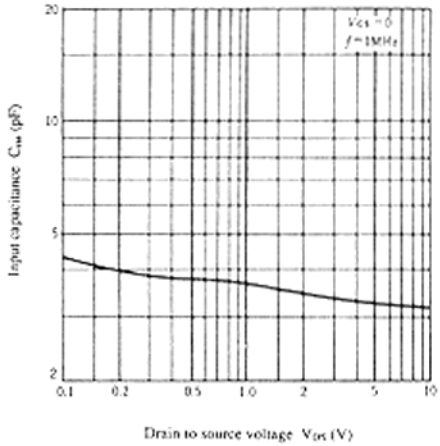

GATE TO SOURCE CUTOFF VOLTAGE VS. DRAIN CURRENT




FORWARD TRANSFER ADMITTANCE VS. DRAIN CURRENT




INPUT CAPACITANCE VS. DRAIN TO SOURCE VOLTAGE




REVERSE TRANSFER CAPACITANCE VS. DRAIN TO SOURCE VOLTAGE