2SK1215

Silicon N-Channel MOS FET

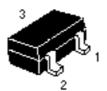
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Application

VHF amplifier

Outline

CMPAK



- 1. Gate
- 2. Drain
- 3. Source



2SK1215

Absolute Maximum Ratings ($Ta = 25^{\circ}C$)

| Item | Symbol | Ratings | Unit |
|---------------------------|------------------|-------------|------|
| Drain to source voltage | V_{DSX}^{*1} | 20 | V |
| Gate to source voltage | V _{GSS} | ±5 | V |
| Drain current | I _D | 30 | mA |
| Gate current | I _G | ±1 | mA |
| Channel power dissipation | Pch | 100 | mW |
| Channel temperature | Tch | 150 | °C |
| Storage temperature | Tstg | -55 to +150 | °C |

Note: 1. $V_{GS} = -4 \text{ V}$

Electrical Characteristics ($Ta = 25^{\circ}C$)

| Item | Symbol | Min | Тур | Max | Unit | Test conditions |
|-----------------------------------|---------------------|-----|------|------|------|--|
| Drain to source breakdown voltage | $V_{(BR)DSX}$ | 20 | _ | _ | V | $I_D = 100 \ \mu A, \ V_{GS} = -4 \ V$ |
| Gate cutoff current | I _{GSS} | _ | _ | ±20 | nA | $V_{GS} = \pm 5 \text{ V}, V_{DS} = 0$ |
| Drain current | I _{DSS} *1 | 4 | _ | 12 | mA | $V_{DS} = 10 \text{ V}, V_{GS} = 0$ |
| Gate to source cutoff voltage | $V_{GS(off)}$ | 0 | _ | -2.0 | V | $V_{DS} = 10 \text{ V}, I_{D} = 10 \mu\text{A}$ |
| Forward transfer admittance | y _{fs} | 8 | 14 | _ | mS | $V_{DS} = 10 \text{ V}, V_{GS} = 0, f = 1 \text{ kHz}$ |
| Input capacitance | Ciss | _ | 2.5 | _ | pF | $V_{DS} = 10 \text{ V}, V_{GS} = 0, f = 1 \text{ MHz}$ |
| Output capacitance | Coss | | 1.6 | _ | pF | _ |
| Reverse transfer capacitance | Crss | _ | 0.03 | _ | pF | _ |
| Power gain | PG | 24 | _ | _ | dB | $V_{DS} = 10 \text{ V}, V_{GS} = 0,$ f = 100 MHz |
| Noise figure | NF | _ | _ | 3 | dB | _ |

Note: 1. The 2SK1215 is grouped by I_{DSS} as follows.

| Grade | D | E | F |
|------------------|--------|---------|---------|
| Mark | IGD | IGE | IGF |
| I _{DSS} | 4 to 8 | 6 to 10 | 8 to 12 |

See characteristic curves of 2SK359.

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