

2SK3077A

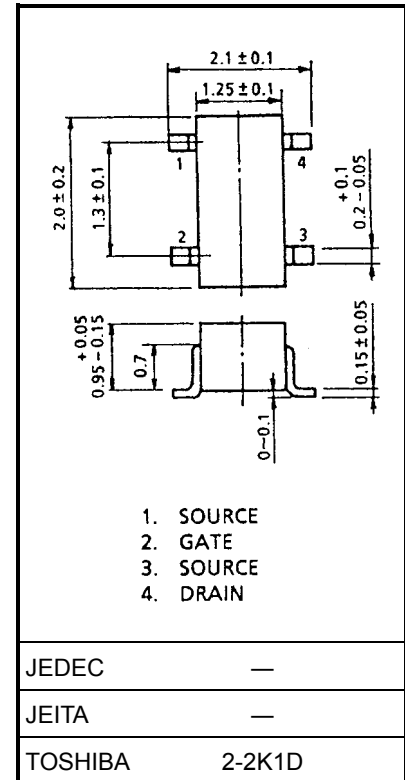
VHF/UHF Band Amplifier Applications

Unit: mm

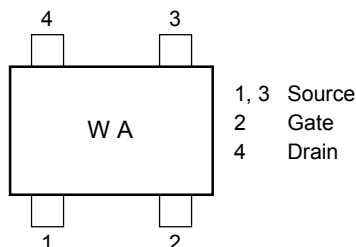
- Output power: $P_o \geq 20.5\text{dBmW}$
- Gain: $G_p \geq 10.5\text{dB}$
- Drain Efficiency: $\eta_D \geq 50\%$

Maximum Ratings ($T_a = 25^\circ\text{C}$)

| Characteristics | Symbol | Rating | Unit |
|---------------------------|-----------|---------|------------------|
| Drain-source voltage | V_{DSS} | 10 | V |
| Gate-source voltage | V_{GSS} | 5 | V |
| Drain current | I_D | 0.1 | A |
| Power dissipation | P_D | 0.1 | W |
| Channel temperature | T_{ch} | 150 | $^\circ\text{C}$ |
| Storage temperature range | T_{stg} | -45~150 | $^\circ\text{C}$ |



Marking

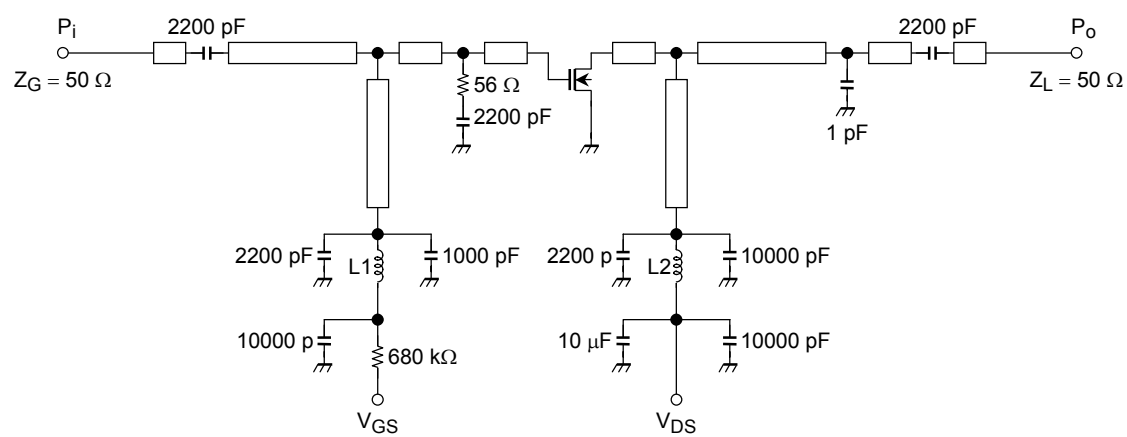


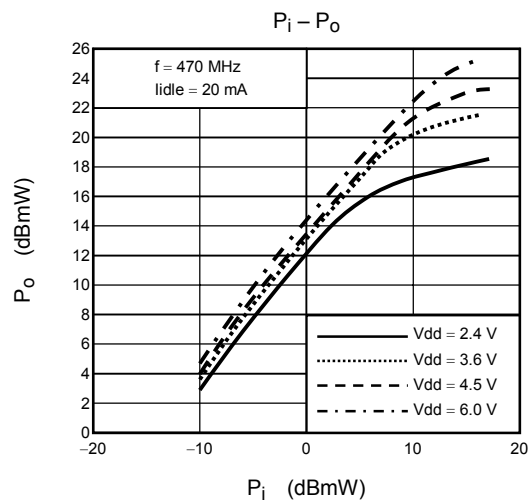
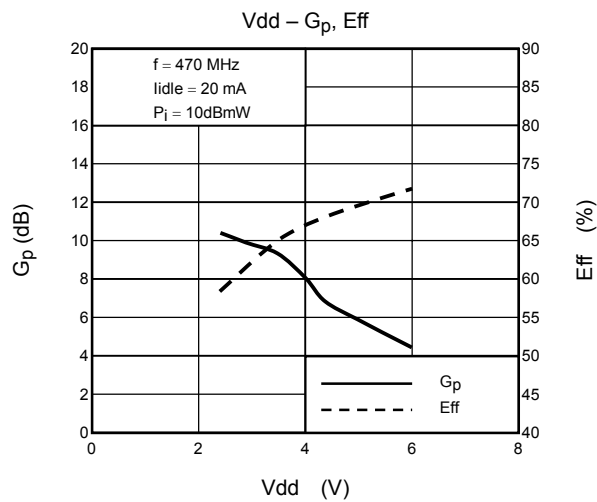
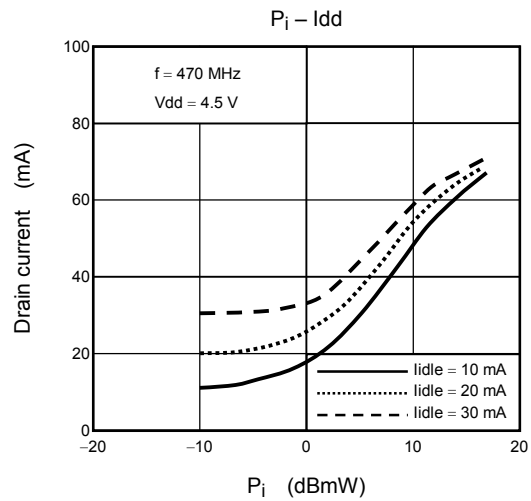
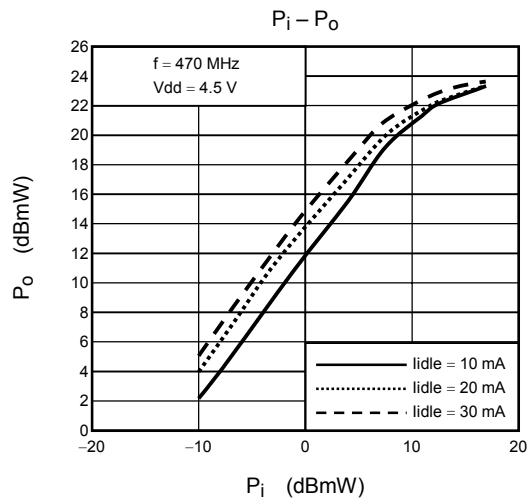
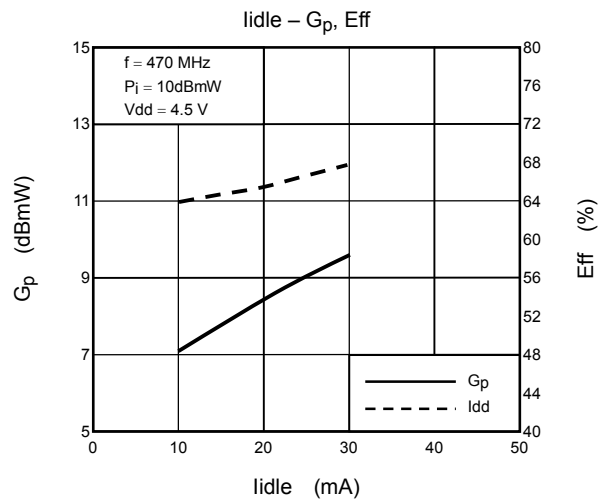
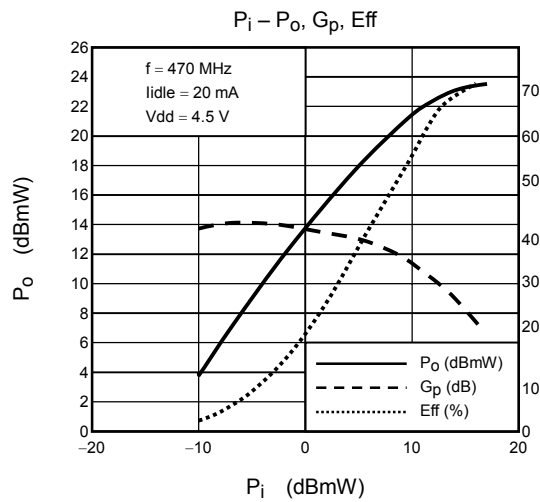
Electrical Characteristics ($T_a = 25^\circ\text{C}$)

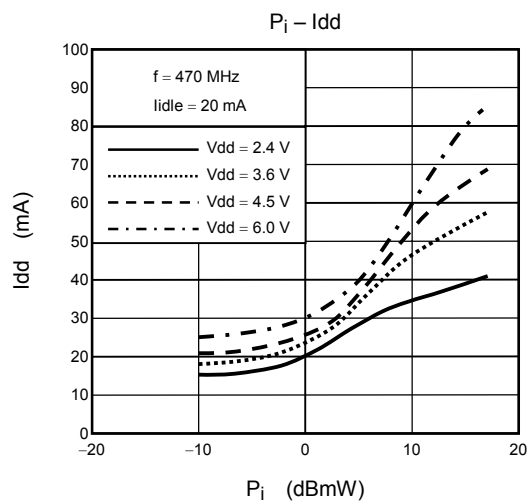
| Characteristics | Symbol | Test Condition | Min | Typ. | Max | Unit |
|-----------------------------|-----------|---|----------------|------|------|---------------|
| Output power | P_O | $V_{DS} = 4.5\text{ V}$, $I_{idle} = 20\text{ mA}$ ($V_{GS} = \text{adjust}$) $f = 470\text{ MHz}$, $P_i = 10\text{dBmW}$ | 20.5 | — | — | dBmW |
| Drain efficiency | η_D | | 50 | — | — | % |
| Power gain | G_p | | 10.5 | — | — | dB |
| Threshold voltage | V_{th} | $V_{DS} = 4.8\text{ V}$, $I_D = 0.5\text{ mA}$ | 0.25 | — | 1.25 | V |
| Drain cut-off current | I_{DSS} | $V_{DS} = 10\text{ V}$, $V_{GS} = 0\text{ V}$ | — | — | 10 | μA |
| Gate-source leakage current | I_{GSS} | $V_{GS} = 5\text{ V}$, $V_{DS} = 0\text{ V}$ | — | — | 5 | μA |
| Load mismatch (Note 1) | — | $V_{DS} = 6.5\text{ V}$, $f = 470\text{ MHz}$, $P_i = 10\text{dBmW}$, $P_o = 20.5\text{dBmW}$ ($V_{GS} = \text{adjust}$) VSWR LOAD 10:1 all phase | No degradation | | | — |

Caution: This transistor is the electrostatic sensitive device. Please handle with caution.

Note 1: When the RF output power test fixture is used

PF Output Power Test Fixture






Caution: These are typical curves and devices are not necessarily guaranteed at these curves.

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