

MAQ 3 078

The item can replace 2SK3078



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| Approved by: |
| Checked by: |
| Issued by: |

SPECIFICATION

PRODUCT: N -CHANNEL MOS TYPE

MODEL: MAQ3 0 7 8 SOT89

HOPE MICROELECTRONIC CO.,LIMITED

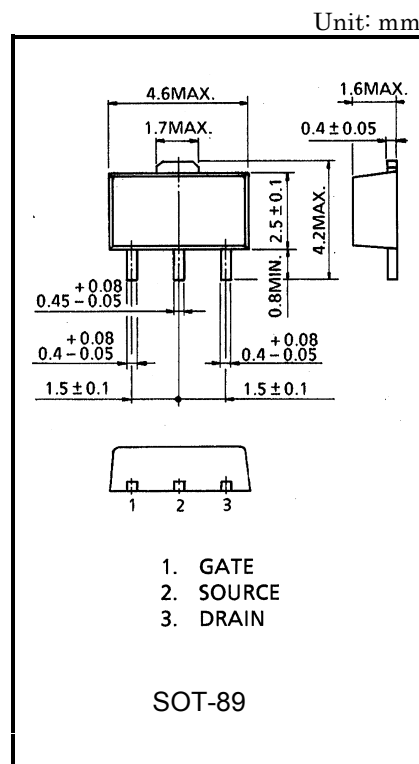
900 MHz BAND AMPLIFIER APPLICATIONS (GSM)

- Output Power : $P_O = 27.0$ dBmW (Min.)
- Gain : $G_P = 12.5$ dB (Min.)
- Drain Efficiency : $\eta_D = 46\%$ (Typ.)

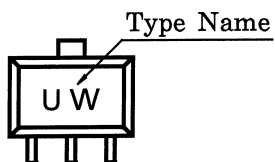
MAXIMUM RATINGS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|---------------------------|-----------|---------|------|
| Drain-Source Voltage | V_{DSS} | 10 | V |
| Gate-Source Voltage | V_{GSS} | 5 | V |
| Drain Current | I_D | 0.5 | A |
| Power Dissipation | P_{D^*} | 3.0 | W |
| Channel Temperature | T_{ch} | 150 | °C |
| Storage Temperature Range | T_{stg} | -45~150 | °C |

*: $T_c = 25^\circ\text{C}$ When mounted on a 1.6 mm glass epoxy PCB



MARKING



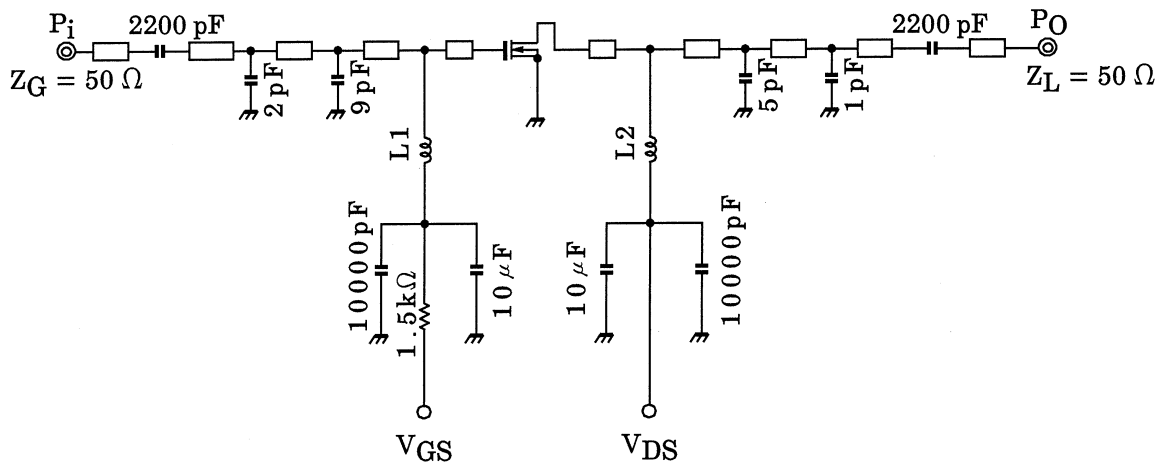
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN | TYP. | MAX | UNIT |
|-----------------------------|------------------|--|------|------|------|------|
| Output Power | P _O | V _{DS} = 4.8 V | 27.0 | — | — | dBmW |
| Drain Efficiency | η _D | I _{idle} = 108 mA (V _{GS} = adjust) f = 915 MHz, P _i = 14.5 dBmW | — | 46.0 | — | % |
| Power Gain | G _P | Z _G = Z _L = 50 Ω | 12.5 | — | — | dB |
| Threshold Voltage | V _{th} | V _{DS} = 4.8 V, I _D = 0.5 mA | 0.20 | — | 1.20 | V |
| Drain Cut-off Current | I _{DSS} | V _{DS} = 10 V, V _{GS} = 0 V | — | — | 10 | μA |
| Gate-Source Leakage Current | I _{GSS} | V _{GS} = 5 V, V _{DS} = 0 V | — | — | 5 | μA |

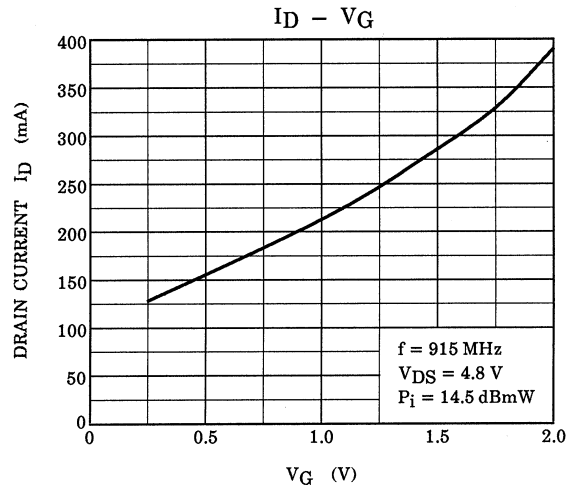
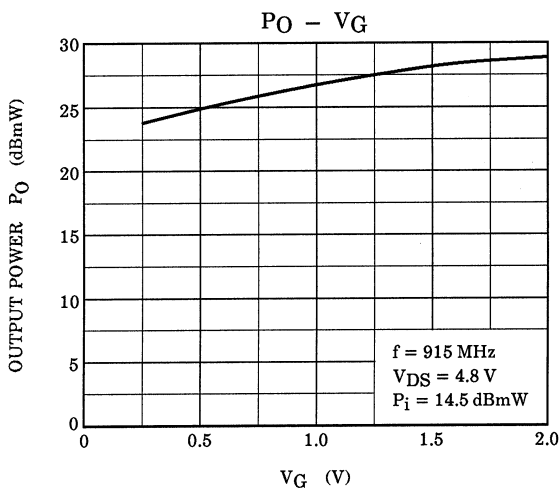
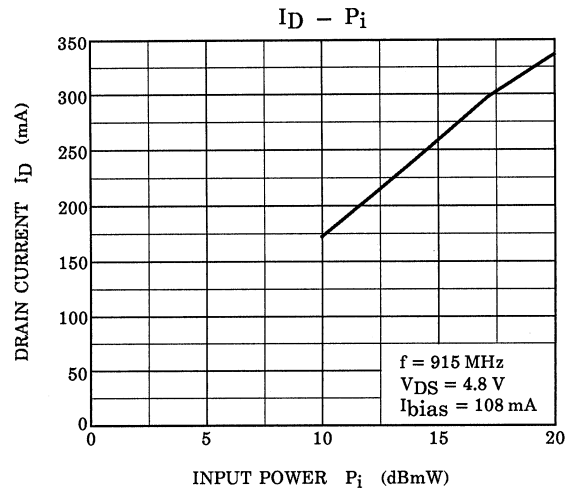
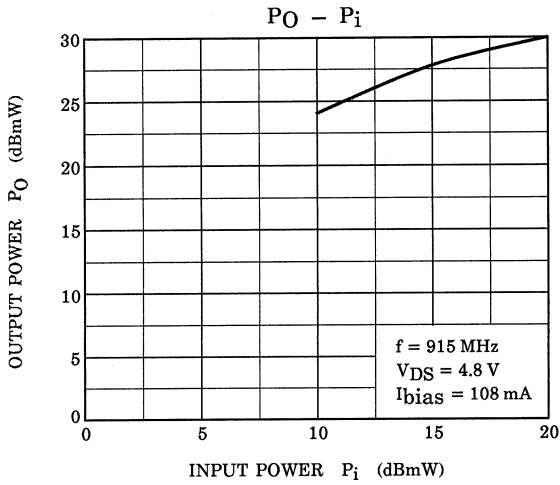
CAUTION

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

RF OUTPUT POWER TEST FIXTURE



- L1 : φ0.6 mm, 5.5 mmID, 4T
- L2 : φ0.6 mm, 5.5 mmID, 8T



CAUTION

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