

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE

2SK3078

900 MHz BAND AMPLIFIER APPLICATIONS (GSM)

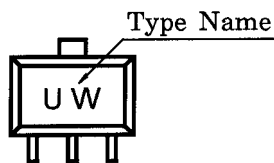
- Output Power : $P_O = 27.0$ dBmW (Min.)
- Gain : $G_P = 12.5$ dB (Min.)
- Drain Efficiency : $\eta_D = 46\%$ (Typ.)

MAXIMUM RATINGS (Ta = 25°C)

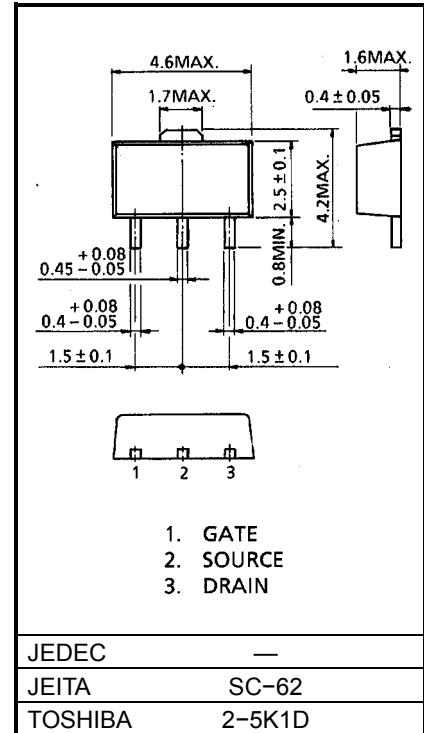
CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	V_{DSS}	10	V
Gate-Source Voltage	V_{GSS}	5	V
Drain Current	I_D	0.5	A
Power Dissipation	P_{D^*}	3.0	W
Channel Temperature	T_{ch}	150	°C
Storage Temperature Range	T_{stg}	-45~150	°C

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

MARKING



Unit: mm



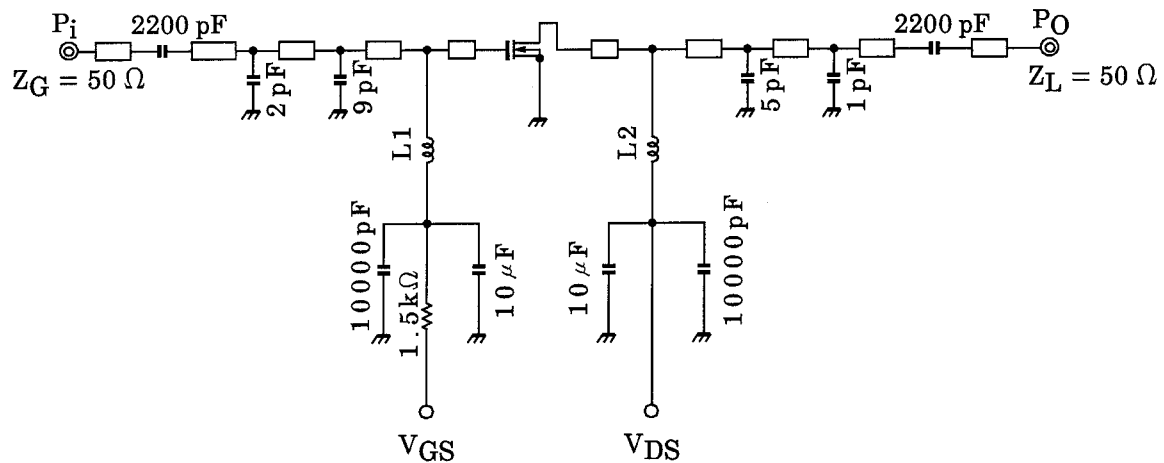
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Output Power	P_O	$V_{DS} = 4.8\text{ V}$ Iidle = 108 mA ($V_{GS} = \text{adjust}$) $f = 915\text{ MHz}$, $P_i = 14.5\text{ dBmW}$	27.0	—	—	dBmW
Drain Efficiency	η_D		—	46.0	—	%
Power Gain	G_p		12.5	—	—	dB
Threshold Voltage	V_{th}	$V_{DS} = 4.8\text{ V}$, $I_D = 0.5\text{ mA}$	0.20	—	1.20	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

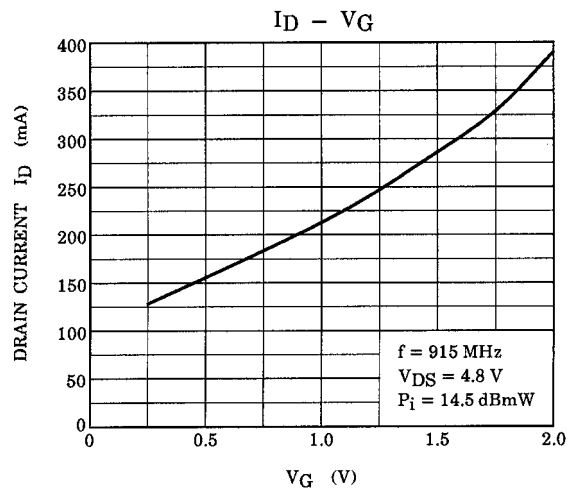
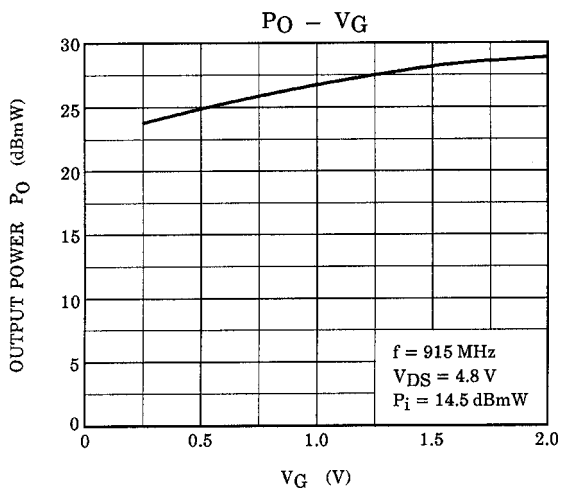
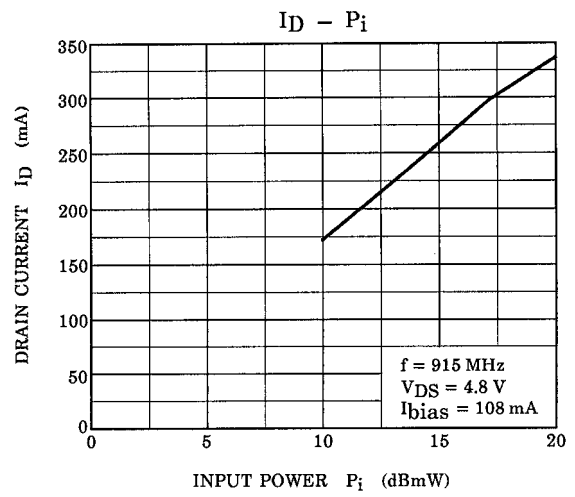
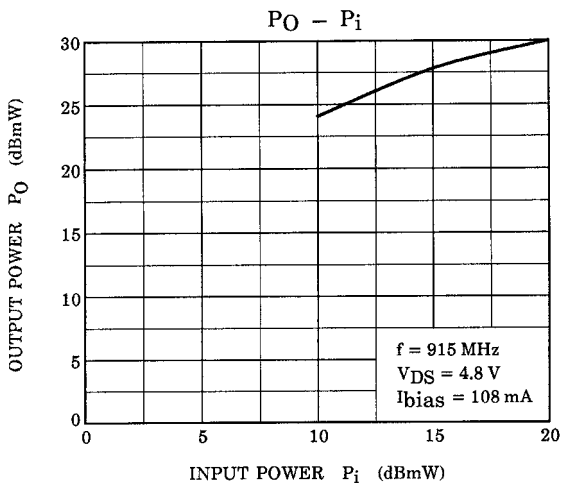
CAUTION

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

RF OUTPUT POWER TEST FIXTURE



- L1 : $\phi 0.6\text{ mm}$, 5.5 mmID, 4T
- L2 : $\phi 0.6\text{ mm}$, 5.5 mmID, 8T



CAUTION

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

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