

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE

2SK3078

900 MHz BAND AMPLIFIER APPLICATIONS (GSM)

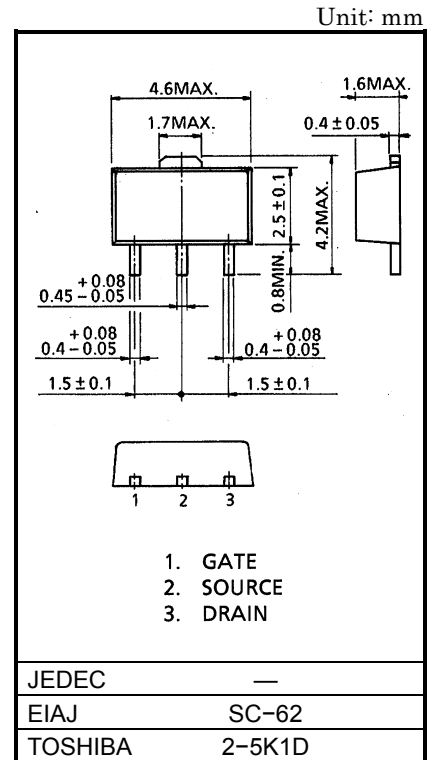
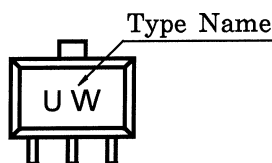
- Output Power : $P_O = 27.0 \text{ dBmW (Min.)}$
- Gain : $G_P = 12.5 \text{ dB (Min.)}$
- Drain Efficiency : $\eta_D = 46\% \text{ (Typ.)}$

MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

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	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-45~150	$^\circ\text{C}$

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

MARKING



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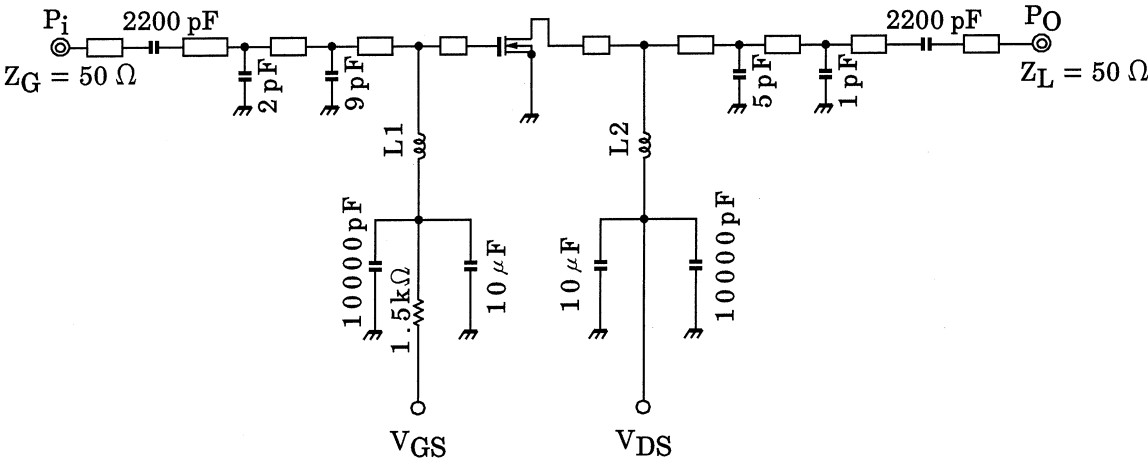
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Output Power	P _O	V _{DS} = 4.8 V I _{idle} = 108 mA (V _{GS} = adjust) f = 915 MHz, P _i = 14.5 dBmW Z _G = Z _L = 50 Ω	27.0	—	—	dBmW
Drain Efficiency	η _D		—	46.0	—	%
Power Gain	G _P		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

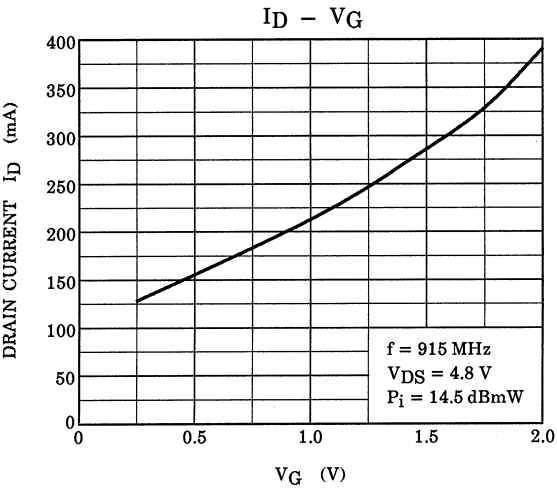
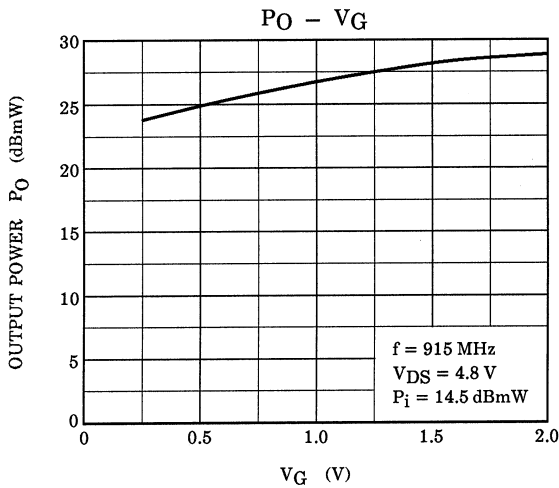
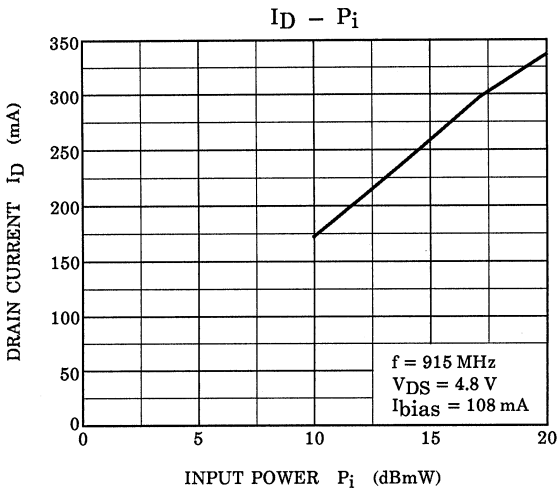
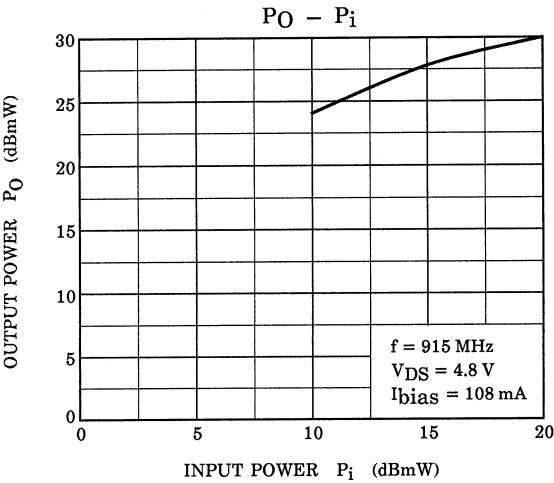
CAUTION

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.