

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE

# 2SK3077

900 MHz BAND AMPLIFIER APPLICATIONS (GSM)

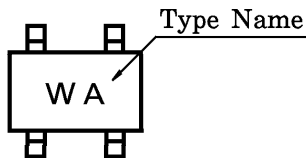
- Output Power :  $P_O = 15.0 \text{ dBmW (Min.)}$
- Gain :  $G_P = 15.0 \text{ dB (Min.)}$
- Drain Efficiency :  $\eta_D = 20\% \text{ (Typ.)}$

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

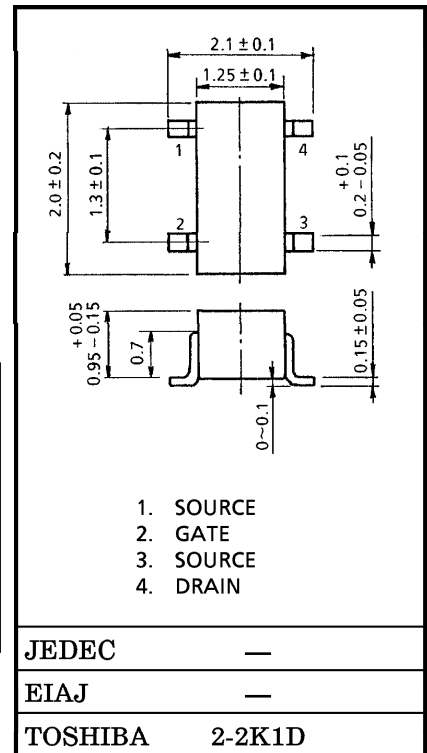
CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	$V_{DSS}$	10	V
Gate-Source Voltage	$V_{GSS}$	5	V
Drain Current	$I_D$	0.1	A
Power Dissipation	$P_D^*$	0.1	W
Channel Temperature	$T_{ch}$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-45~150	$^\circ\text{C}$

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

MARKING



Unit in mm



961001EAA1

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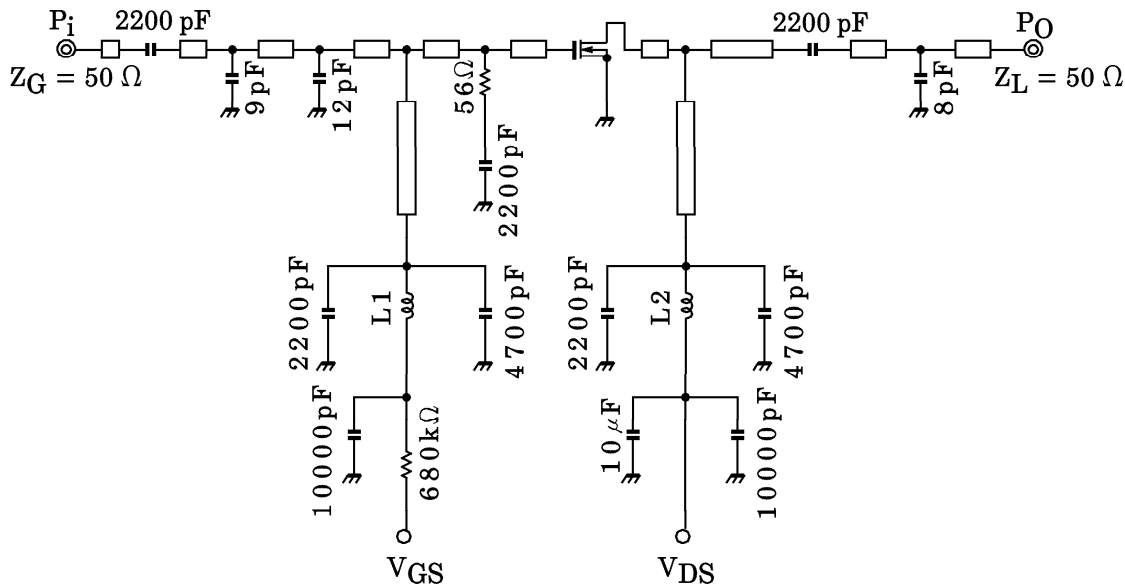
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Power	P <sub>O</sub>	V <sub>DS</sub> = 4.8 V	15.0	—	—	dBmW
Drain Efficiency	η <sub>D</sub>	I <sub>idle</sub> = 43 mA (V <sub>GS</sub> = adjust) f = 915 MHz, P <sub>i</sub> = 0 dBmW	—	20.0	—	%
Power Gain	G <sub>P</sub>	Z <sub>G</sub> = Z <sub>L</sub> = 50 Ω	15.0	—	—	dB
Threshold Voltage	V <sub>th</sub>	V <sub>DS</sub> = 4.8 V, I <sub>D</sub> = 0.5 mA	0.25	—	1.25	V
Drain Cut-off Current	I <sub>DSS</sub>	V <sub>DS</sub> = 10 V, V <sub>GS</sub> = 0 V	—	—	10	μA
Gate-Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> = 5 V, V <sub>DS</sub> = 0 V	—	—	5	μA

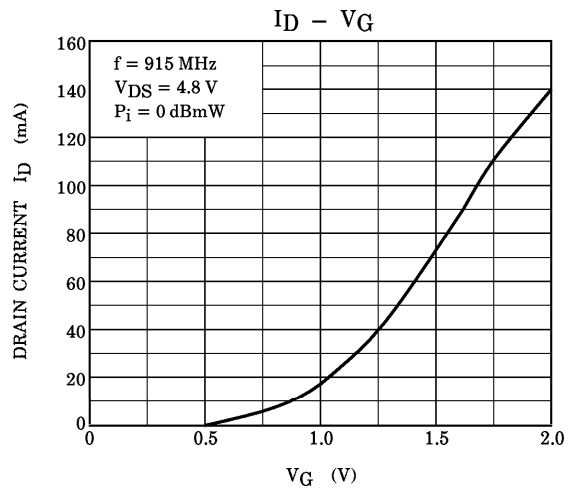
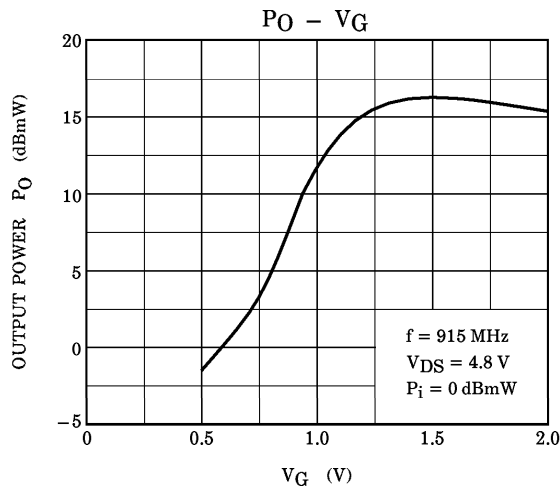
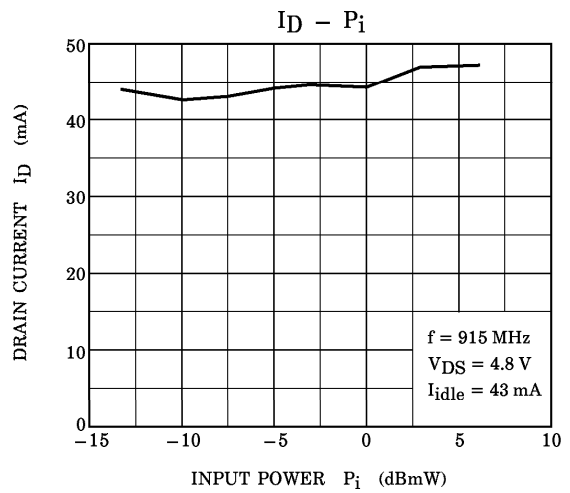
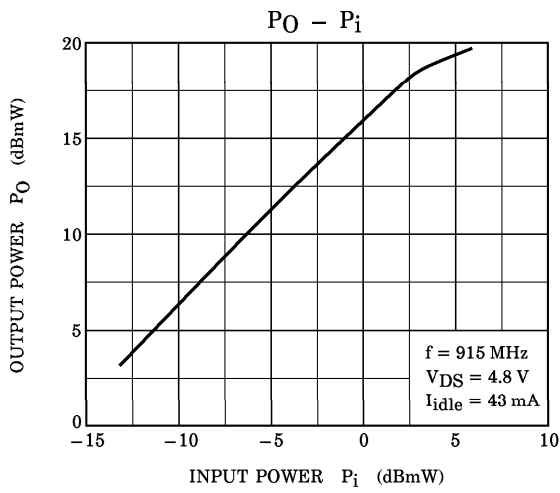
CAUTION

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

RF OUTPUT POWER TEST FIXTURE



- L1 : φ0.6 mm, 5.5 mmID, 5T
- L2 : φ0.6 mm, 5.5 mmID, 8T



**CAUTION**

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