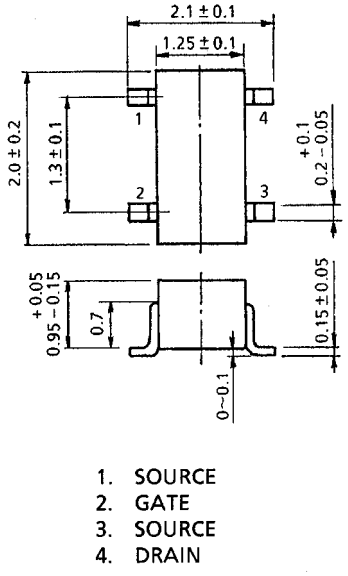
TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE

2SK3077

900 MHz BAND AMPLIFIER APPLICATIONS (GSM)

Unit: mm

- Output Power : P_O = 15.0 dBmW (Min.)
- Gain : G_P = 15.0 dB (Min.)
- Drain Efficiency : η_D = 20% (Typ.)



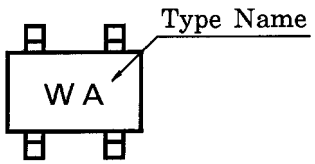
JEDEC	—
JEITA	—
TOSHIBA	2−2K1D

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	0.1	A
Power Dissipation	P_{D*}	0.1	W
Channel Temperature	T_{ch}	150	°C
Storage Temperature Range	T_{stg}	−45~150	°C

*: Tc = 25°C When mounted on a 1.6 mm glass epoxy PCB

MARKING



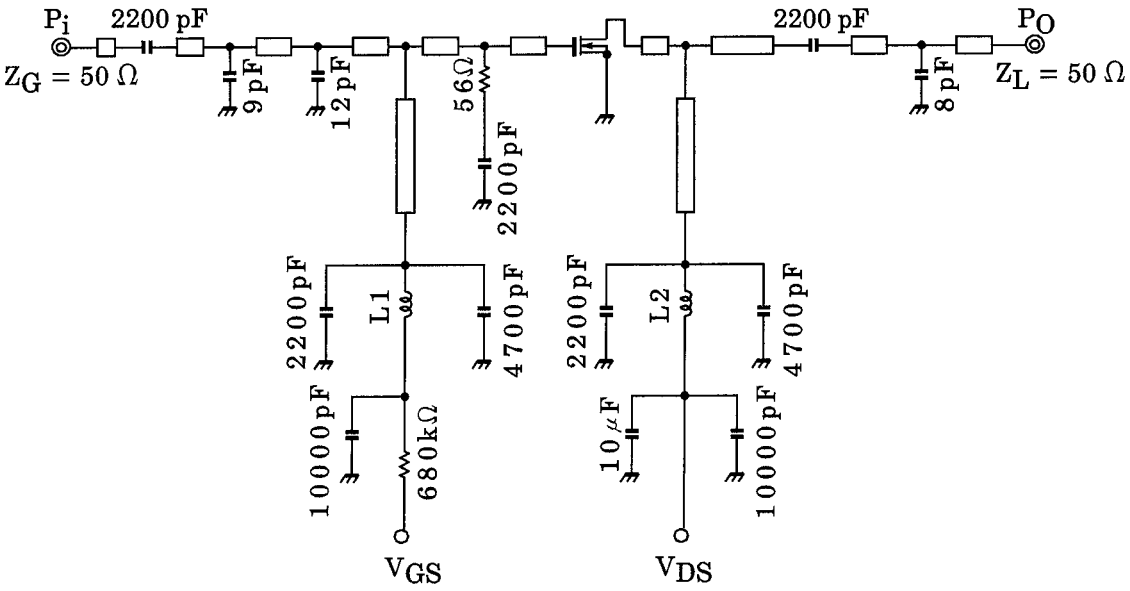
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Output Power	P_O	V_{DS} = 4.8V Iidle = 43 mA (V_{GS} = adjust) f = 915 MHz, P_i = 0 dBmW	15.0	—	—	dBmW
Drain Efficiency	η_D		—	20.0	—	%
Power Gain	G_P		15.0	—	—	dB
Threshold Voltage	V_{th}	V_{DS} = 4.8 V, I_D = 0.5 mA	0.25	—	1.25	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

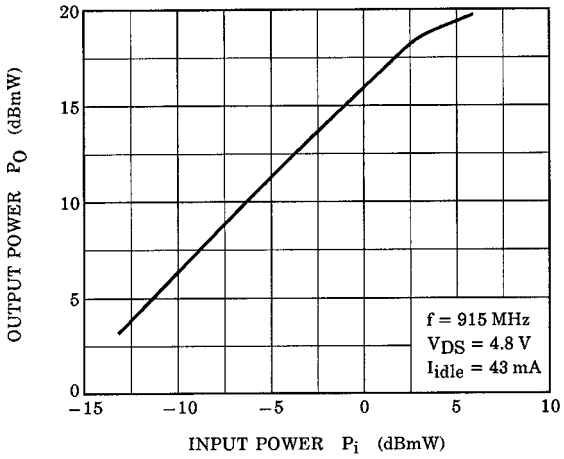
This transistor is the electrostatic sensitive device.
Please handle with caution.

RF OUTPUT POWER TEST FIXTURE

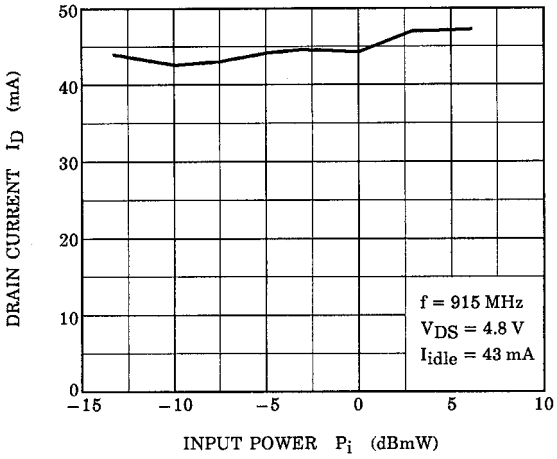


L1 : ϕ0.6 mm, 5.5 mmID, 5T
L2 : ϕ0.6 mm, 5.5 mmID, 8T

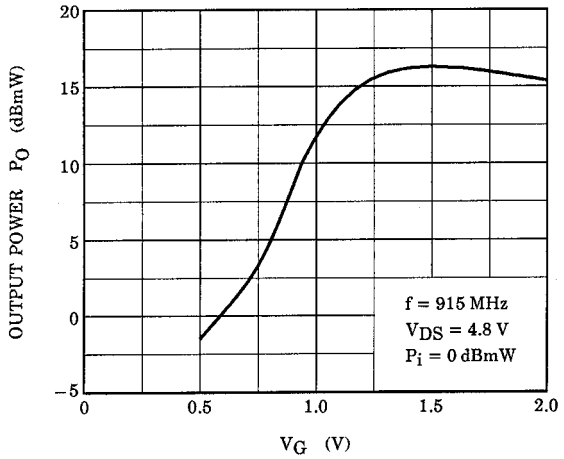
$P_O - P_i$



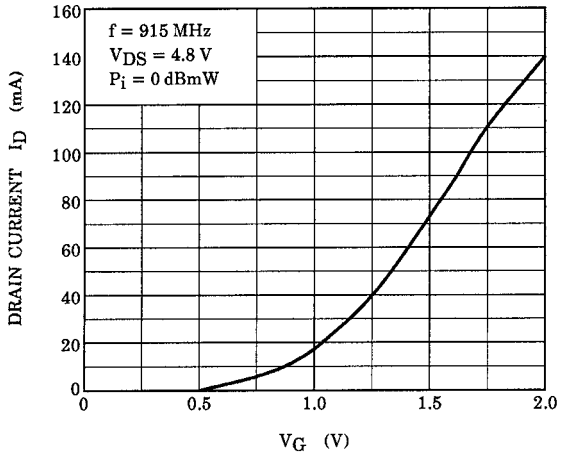
$I_D - P_i$



$P_O - V_G$



$I_D - V_G$



CAUTION

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

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