TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE

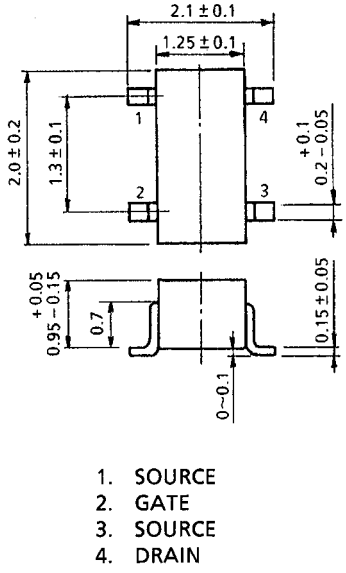
2SK3077

900 MHz BAND AMPLIFIER APPLICATIONS (GSM)

(Note)The TOSHIBA products listed in this document are intended for high frequency Power Amplifier of telecommunications equipment. These TOSHIBA products are neither intended nor warranted for any other use. Do not use these TOSHIBA products listed in this document except for high frequency Power Amplifier of telecommunications equipment.

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

Unit: mm



1. SOURCE
2. GATE
3. SOURCE
4. DRAIN

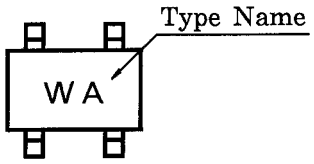
JEDEC	—
JEITA	—
TOSHIBA	2−2K1D

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*}	250	mW
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℃)

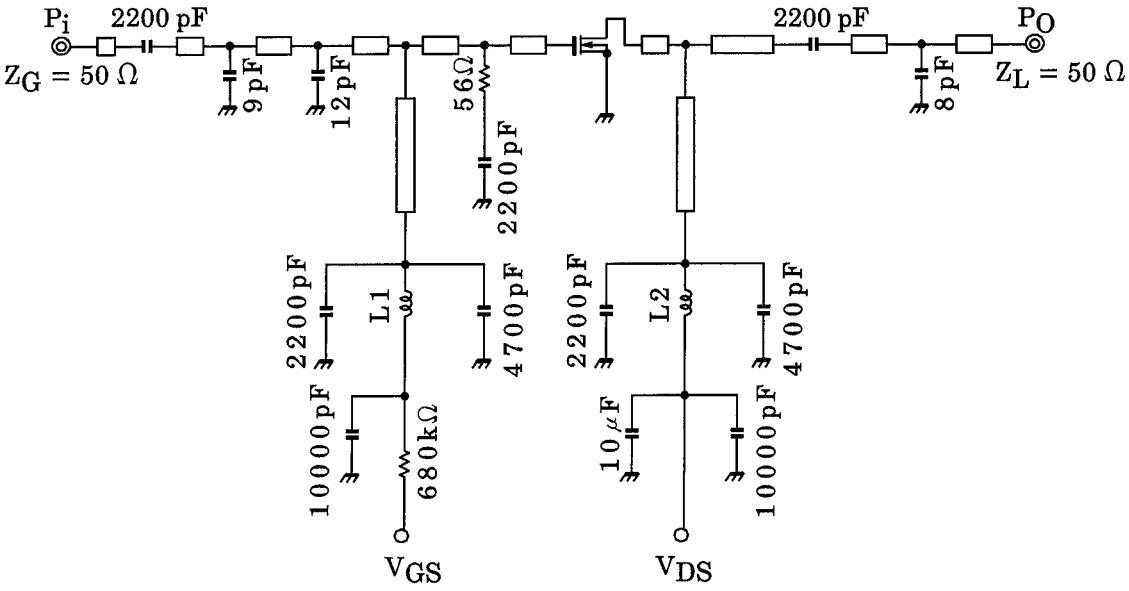
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Output Power	P_O	V_{DS} = 4.8V Iidle = 43 mA (V_{GS} = adjust) f = 915 MHz, P_i = 0 dBmW	15.0	—	—	dBmW
Drain Efficiency	η_D		—	20.0	—	%
Power Gain	G_P		15.0	—	—	dB
Threshold Voltage	V_{th}	V_{DS} = 4.8 V, I_D = 0.5 mA	0.25	—	1.25	V
Drain Cut-off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

Note 1: These characteristic values are measured using measurement tools specified by Toshiba.

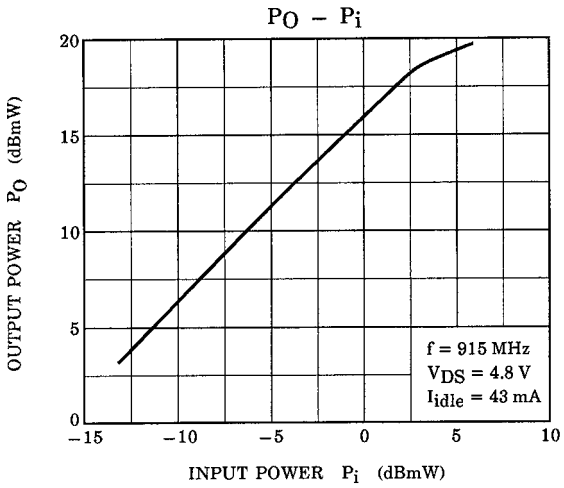
CAUTION

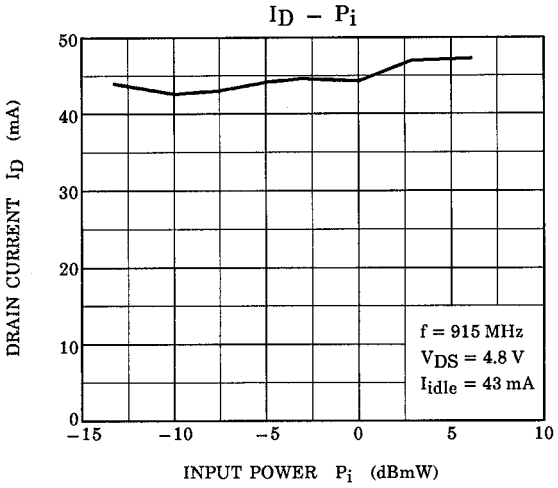
This transistor is the electrostatic sensitive device.
Please handle with caution.

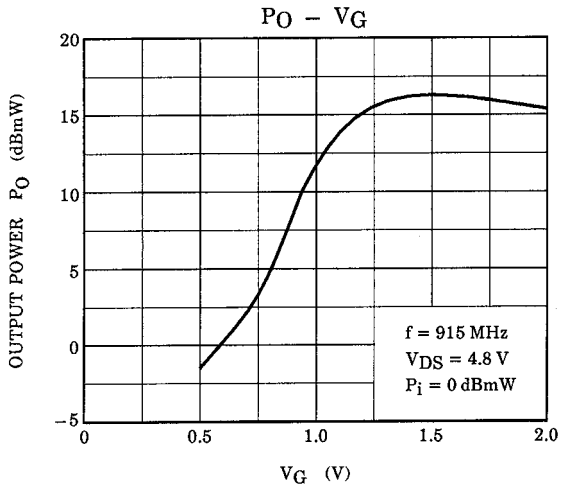
RF OUTPUT POWER TEST FIXTURE

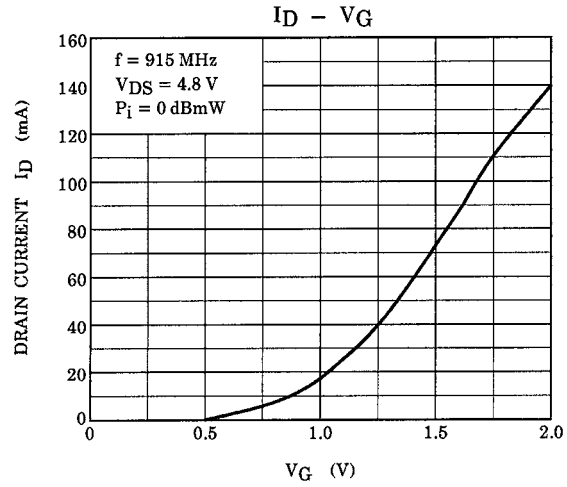


L1 : ϕ0.6 mm, 5.5 mmID, 5T
L2 : ϕ0.6 mm, 5.5 mmID, 8T









CAUTION

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

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