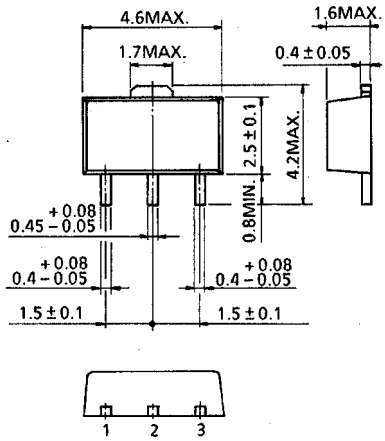
TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE

2SK3074

RF POWER MOSFET
FOR VHF−AND UHF-BAND POWER AMPLIFIER

- Output Power : $P_O \geq 630mW$
- Power Gain : $G_P \geq 14.9dB$
- Drain Efficiency : $\eta_D \geq 45\%$

Unit in mm



1. GATE
2. SOURCE
3. DRAIN

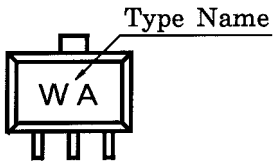
JEDEC	—
JEITA	SC−62
TOSHIBA	2−5K1D

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	V_{DSS}	30	V
Gate-Source Voltage	V_{GSS}	25	V
Drain Current	I_D	1	A
Drain Power Dissipation	P_D*	3	W
Channel Temperature	T_{ch}	150	°C
Storage Temperature Range	T_{stg}	−45~150	°C

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

MARKING



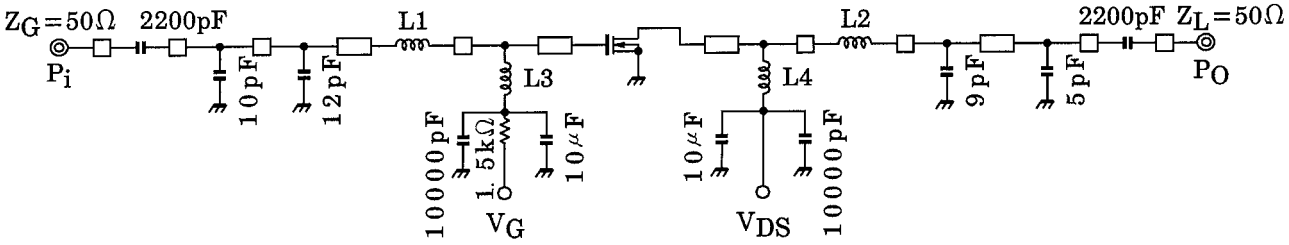
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Power	P_O	V_{DS} = 9.6V Iidle = 50mA (V_{GS} = adjust) f = 520MHz, P_i = 20mW	630	—	—	mW
Drain Efficiency	η_D		45	—	—	%
Power Gain	G_P		14.9	—	—	dB
Gate Threshold Voltage	V_{th}	V_{DS} = 9.6V, I_D = 0.5mA	1.4	1.9	2.4	V
Drain Cut-off Current	I_{DSS}	V_{DS} = 20V, V_{GS} = 0	—	—	10	μA
Gate-Source Leakage Current	I_{GSS}	V_{GS} = 10V, V_{DS} = 0	—	—	5	μA

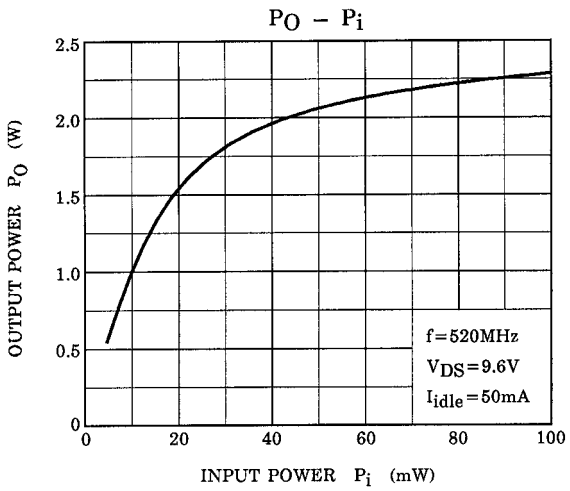
HANDLING PRECAUTION

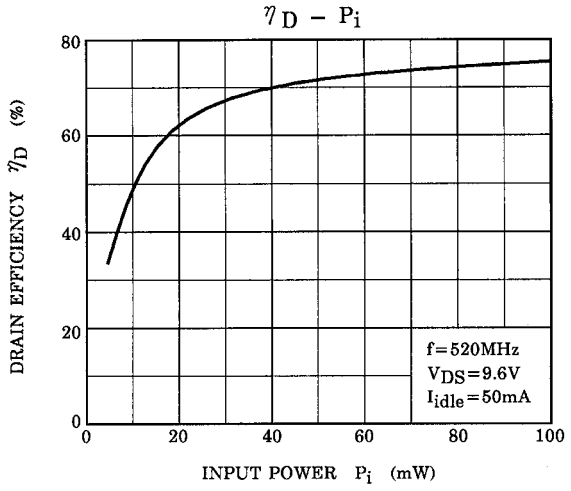
- When handling individual devices, be sure that working desks, human bodies and soldering iron are protected against electrostatic electricity.

RF OUTPUT POWER TEST FIXTURE



L1, L2 : φ0.8, 2ID, 1T
L3 : φ0.8, 5.5ID, 4T
L4 : φ0.8, 5.5ID, 8T





CAUTION

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

RESTRICTIONS ON PRODUCT USE

000707EAA

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