

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE

2SK3074

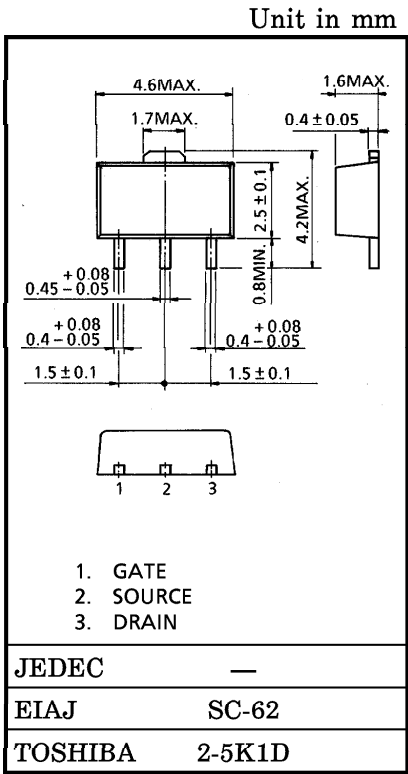
RF POWER MOSFET
FOR VHF- AND UHF-BAND POWER AMPLIFIER

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

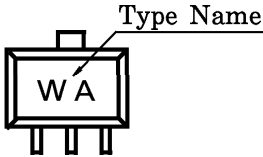
MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

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

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



MARKING



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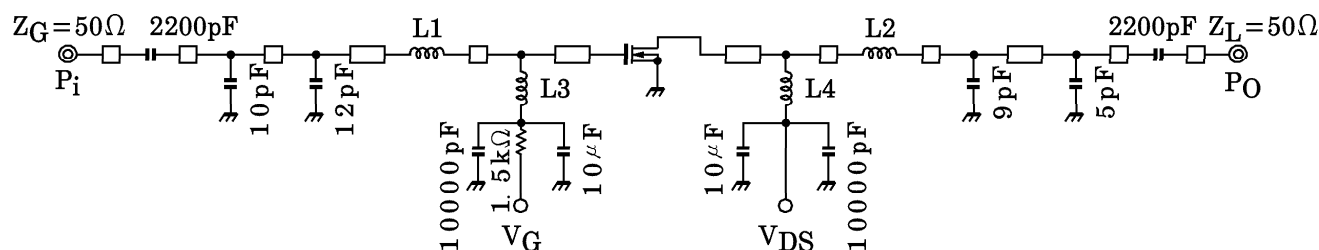
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Power	P _O	V _{DS} = 9.6V	630	—	—	mW
Drain Efficiency	η _D	I _{idle} = 50mA (V _{GS} = adjust) f = 520MHz, P _i = 20mW	45	—	—	%
Power Gain	G _P	Z _G = Z _L = 50Ω	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

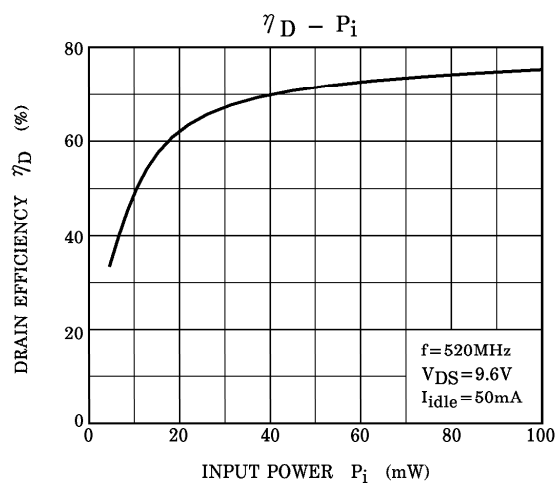
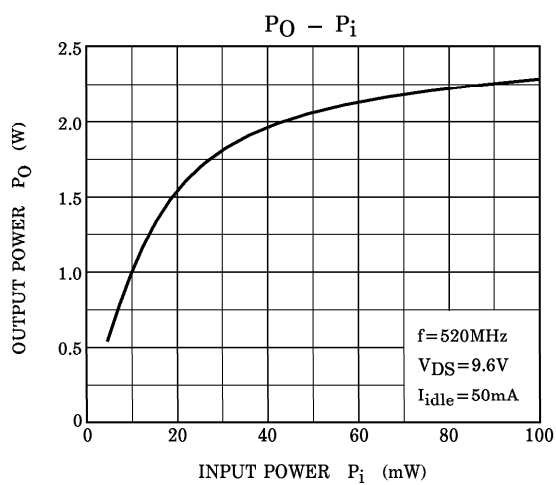
HANDLING PRECAUTION

- 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.