

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE

# 2SK3075

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

(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.

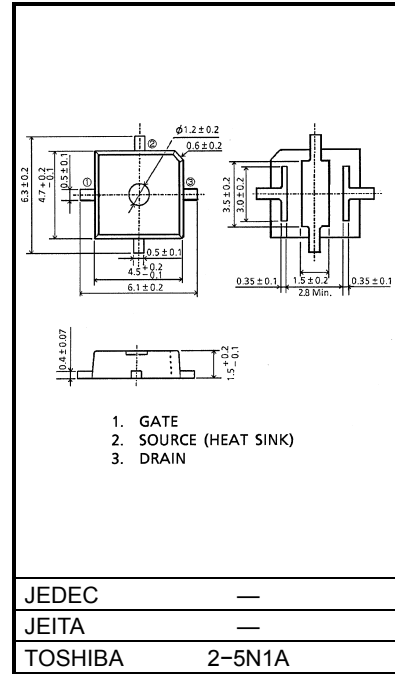
- Output Power :  $P_O \geq 7.5W$
- Power Gain :  $GP \geq 11.7dB$
- Drain Efficiency :  $\eta_D \geq 50\%$

### MAXIMUM RATINGS (Ta = 25°C)

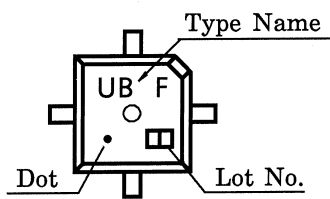
CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	$V_{DSS}$	30	V
Gate-Source Voltage	$V_{GSS}$	25	V
Drain Current	$I_D$	5	A
Drain Power Dissipation	$P_{D^*}$	20	W
Channel Temperature	$T_{ch}$	150	°C
Storage Temperature Range	$T_{stg}$	-45~150	°C

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

Unit: mm



### MARKING



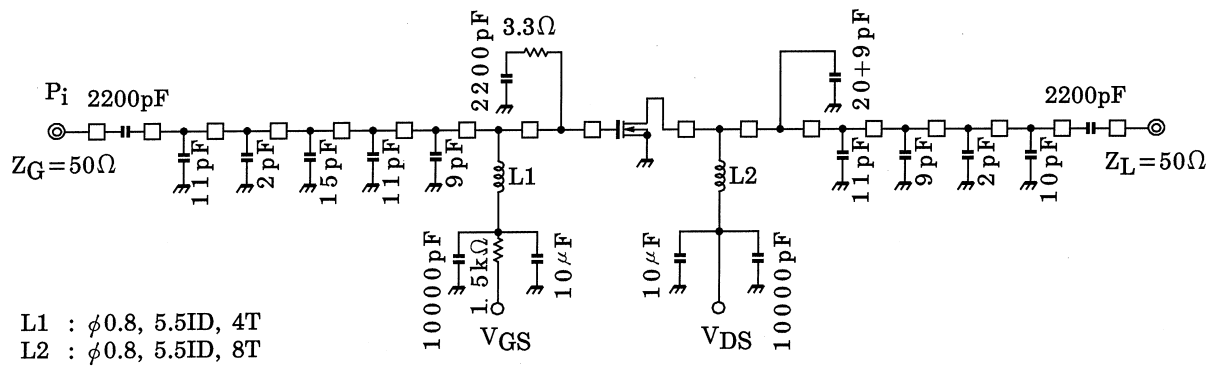
## ELECTRICAL CHARACTERISTICS (Ta = 25°C)

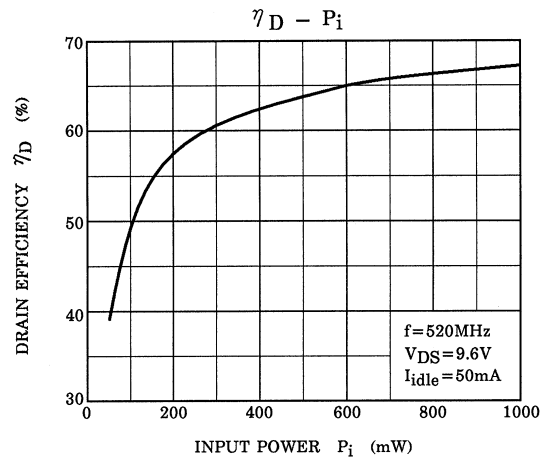
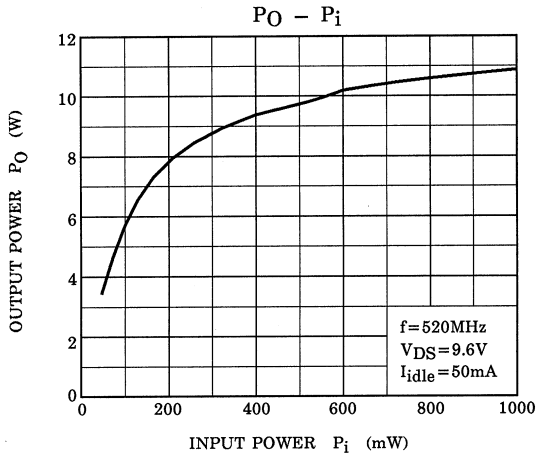
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Output Power	$P_O$	$V_{DS} = 9.6V$ Idle = 50mA ( $V_{GS} = \text{adjust}$ ) $f = 520\text{MHz}$ , $P_i = 500\text{mW}$	7.5	—	—	W
Drain Efficiency	$\eta_D$		50	—	—	%
Power Gain	$G_P$		11.7	—	—	dB
Gate Threshold Voltage	$V_{th}$	$V_{DS} = 9.6V$ , $I_D = 0.5\text{mA}$	1.0	1.5	2.0	V
Drain Cut-off Current	$I_{DSS}$	$V_{DS} = 20V$ , $V_{GS} = 0$	—	—	10	$\mu\text{A}$
Gate-Source Leakage Current	$I_{GSS}$	$V_{GS} = 10V$ , $V_{DS} = 0$	—	—	5	$\mu\text{A}$

## 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





**CAUTION**

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

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