

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE

2SK3075

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

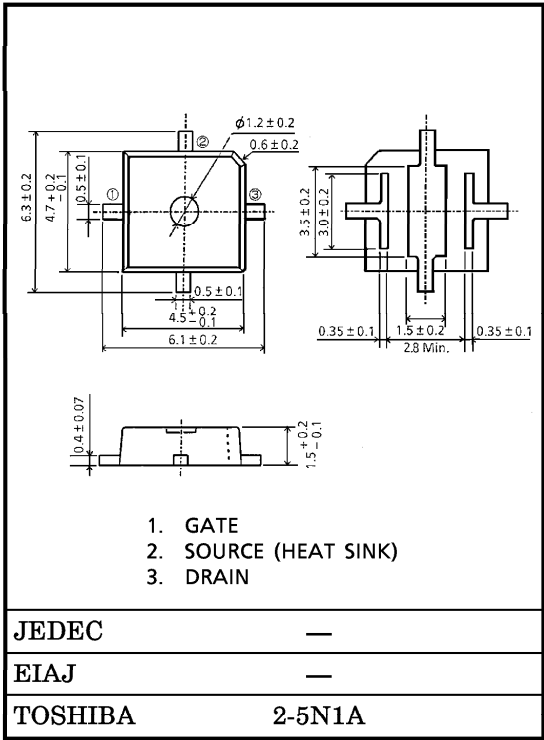
Unit in mm

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

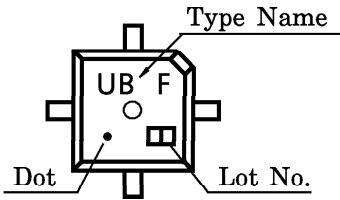
MAXIMUM RATINGS (Ta = 25°C)

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

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



MARKING



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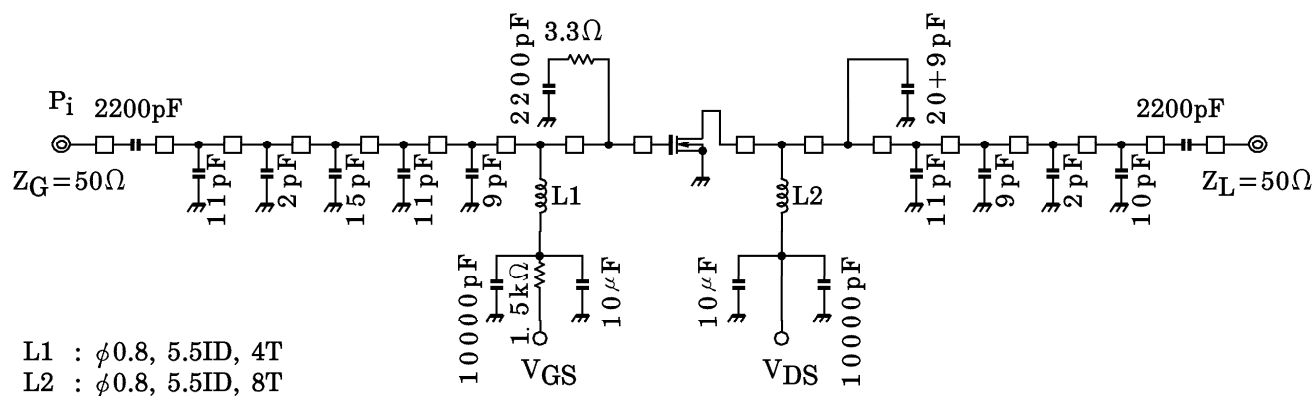
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

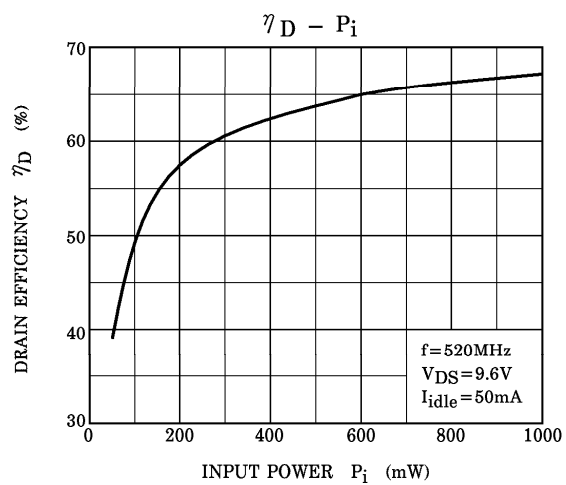
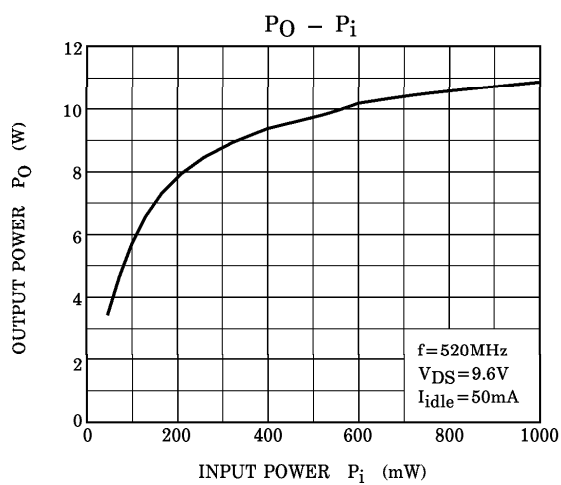
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Power	P_O	$V_{DS} = 9.6\text{V}$	7.5	—	—	W
Drain Efficiency	η_D	Idle = 50mA ($V_{GS} = \text{adjust}$)	50	—	—	%
Power Gain	G_P	$f = 520\text{MHz}$, $P_i = 500\text{mW}$ $Z_G = Z_L = 50\Omega$	11.7	—	—	dB
Gate Threshold Voltage	V_{th}	$V_{DS}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



**CAUTION**

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