

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE

2SK3075

RF POWER MOSFET

FOR VHF- AND UHF-BAND POWER AMPLIFIER

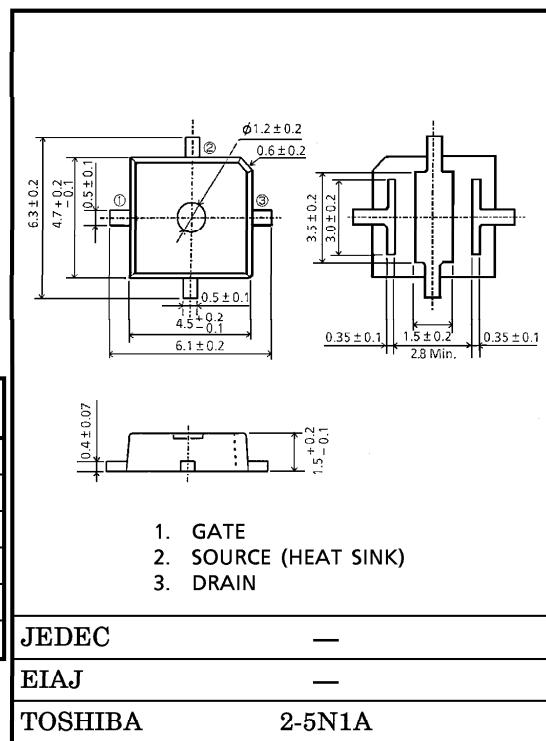
Unit in mm

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

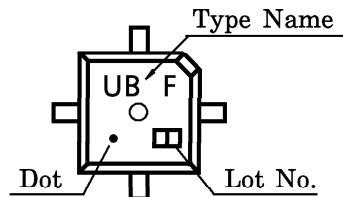
MAXIMUM RATINGS ($T_a = 25^\circ C$)

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

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



MARKING



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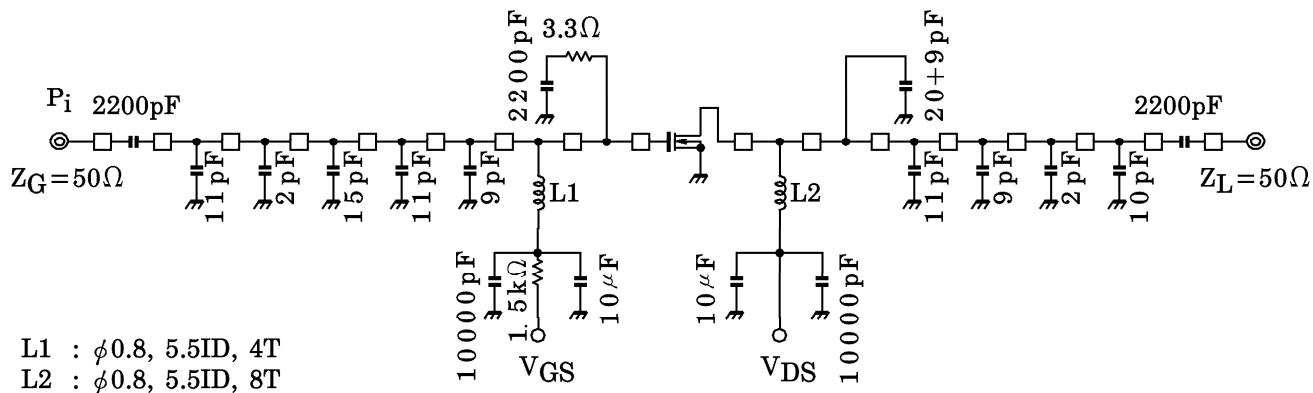
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

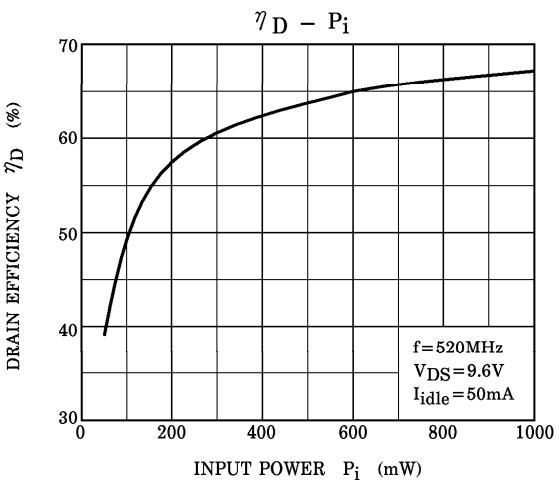
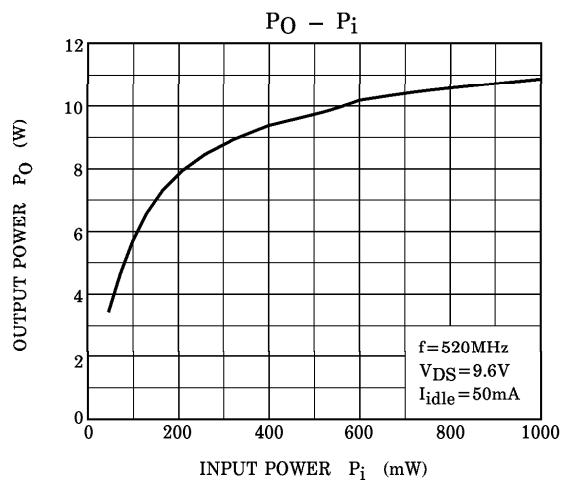
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Power	P_O	$V_{DS} = 9.6\text{V}$	7.5	—	—	W
Drain Efficiency	η_D	Idle = 50mA (V_{GS} = adjust) $f = 520\text{MHz}$, $P_i = 500\text{mW}$	50	—	—	%
Power Gain	G_P	$Z_G = Z_L = 50\Omega$	11.7	—	—	dB
Gate Threshold Voltage	V_{th}	$V_{DS} = 9.6\text{V}$, $I_D = 0.5\text{mA}$	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.