

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE

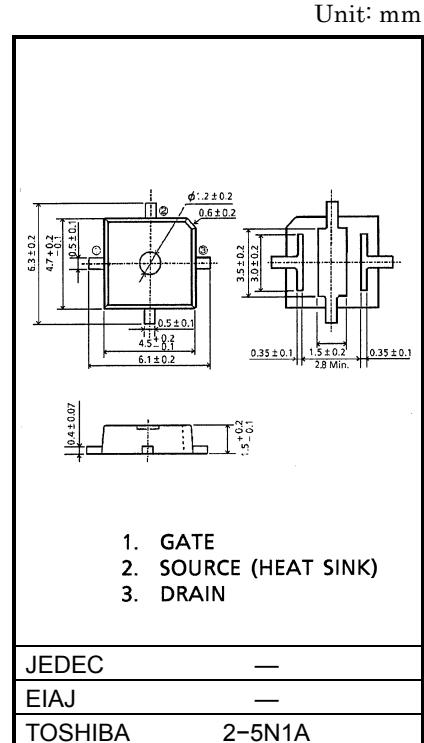
2SK3079

900 MHz BAND AMPLIFIER APPLICATIONS (GSM)

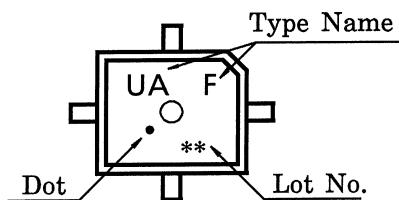
- Output Power : $P_O = 35.5$ dBmW (Min.)
- Gain : $G_P = 9.5$ dB (Min.)
- Drain Efficiency : $\eta_D = 58\%$ (Typ.)

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	V_{DSS}	10	V
Gate-Source Voltage	V_{GSS}	5	V
Drain Current	I_D	5	A
Power Dissipation	P_D^*	20.0	W
Channel Temperature	T_{ch}	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-45~150	$^\circ\text{C}$

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

MARKING



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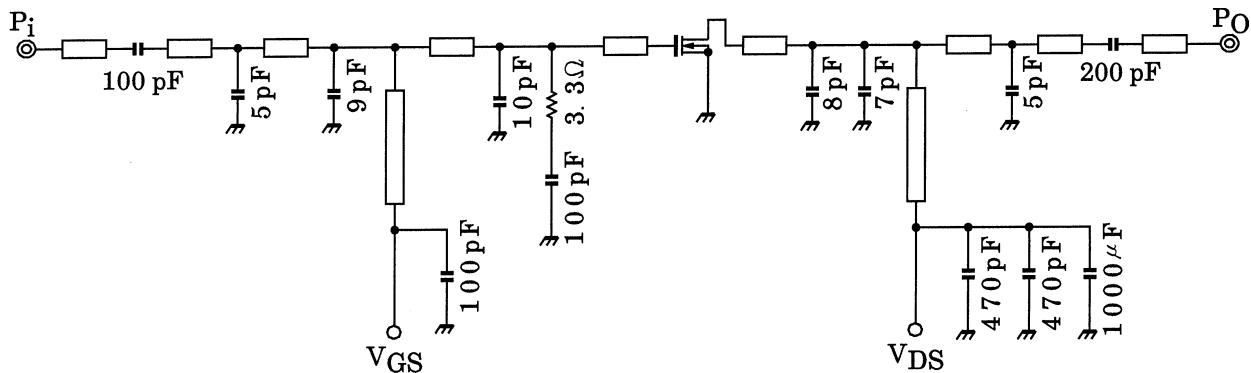
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

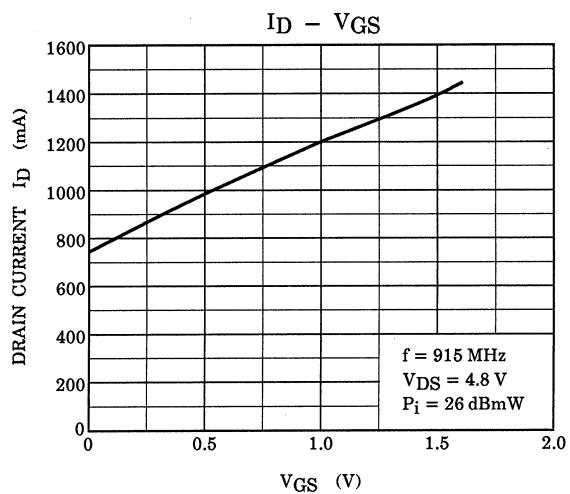
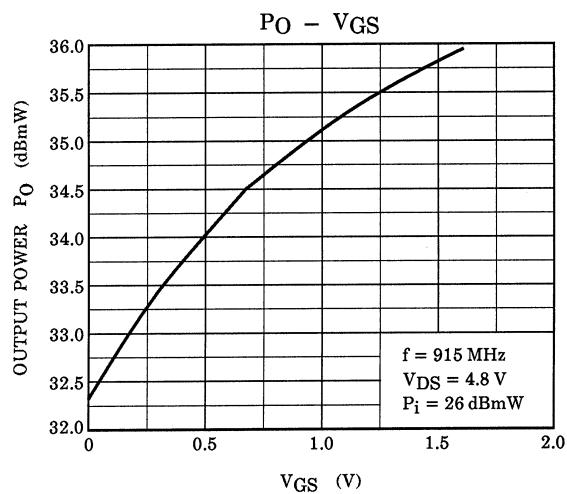
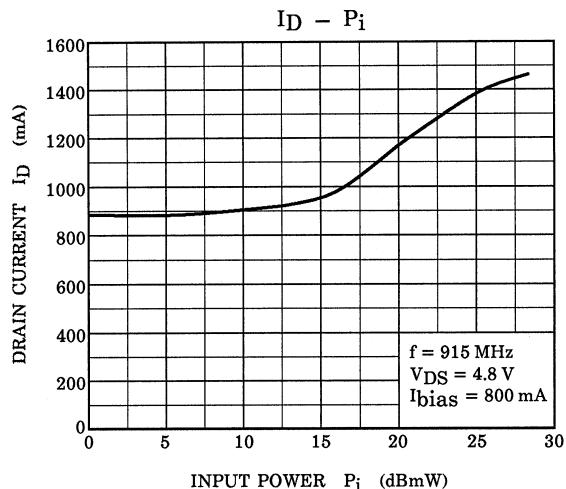
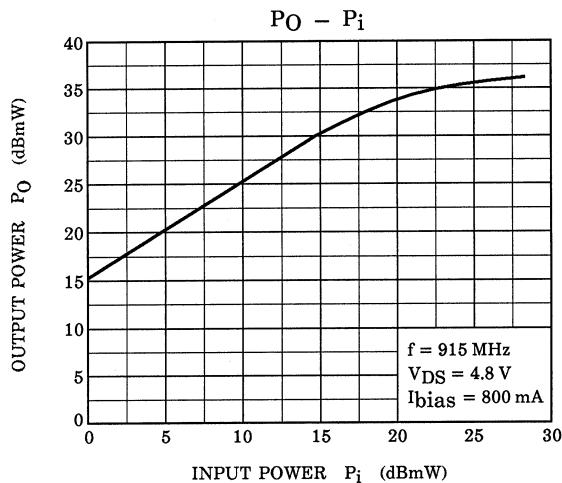
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Output Power	P _O	V _{DS} = 4.8V Idle = 800 mA (V _{GS} = adjust) f = 915MHz, P _i = 26 dBmW Z _G = Z _L = 50 Ω	35.5	—	—	dBmW
Drain Efficiency	η _D		—	58.0	—	%
Power Gain	G _P		9.5	—	—	dB
Threshold Voltage	V _{th}	V _{DS} = 4.8 V, I _D = 0.5 mA	0.30	—	1.30	V
Drain Cut-off Current	I _{DSS}	V _{DS} = 10 V, V _{GS} = 0 V	—	—	10	μA
Gate-Source Leakage Current	I _{GSS}	V _{GS} = 5 V, V _{DS} = 0 V	—	—	5	μA
Load Mismatch	—	V _{DS} = 6.5 V, f = 915 MHz P _i = 26 dBmW P _O = 35.5 dBmW (V _{GS} = adjust) VSWR LOAD 10: 1 all phase	No Degradation			—

CAUTION

This transistor is the electrostatic sensitive device.
Please handle with caution.

RF OUTPUT POWER TEST FIXTURE





CAUTION

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