TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE

2SK3078

900 MHz BAND AMPLIFIER APPLICATIONS (GSM)

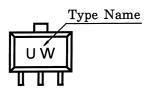
Output Power
 PO = 27.0 dBmW (Min.)
 Gain
 Gp = 12.5 dB (Min.)
 ηD = 46% (Typ.)

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	V_{DSS}	10	٧
Gate-Source Voltage	V_{GSS}	5	V
Drain Current	I _D	0.5	Α
Power Dissipation	P _{D*}	3.0	W
Channel Temperature	T _{ch}	150	°C
Storage Temperature Range	T _{stg}	-45~150	°C

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

MARKING



Unit: m	Unit: mm		
1. GATE 2. SOURCE 3. DRAIN			
JEDEC —			
EIAJ SC-62			
TOSHIBA 2-5K1D			

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damage to property.

In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent TOSHIBA products specifications. Also, please keep in mind the precautions and conditions set forth in the "Handling Guide for Semiconductor Devices," or "TOSHIBA Semiconductor Reliability Handbook" etc.

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

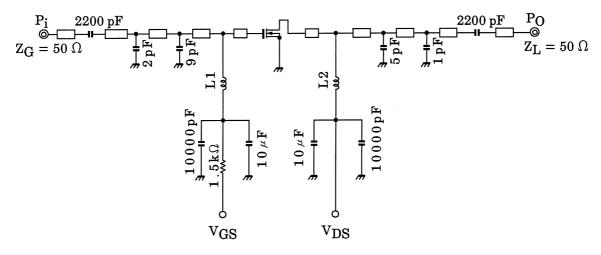
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Output Power	PO	V _{DS} = 4.8 V lidle = 108 mA (V _{GS} = adjust) f = 915 MHz, P _i = 14.5 dBmW	27.0	_	_	dBmW
Drain Efficiency	η_{D}		_	46.0	_	%
Power Gain	G _P	$Z_G = Z_L = 50 \Omega$	12.5	_	_	dB
Threshold Voltage	V _{th}	V _{DS} = 4.8 V, I _D = 0.5 mA	0.20	_	1.20	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

CAUTION

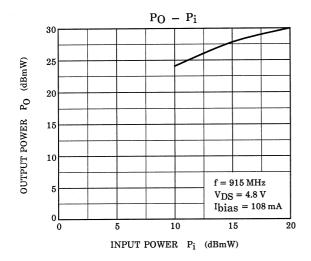
This transistor is the electrostatic sensitive device.

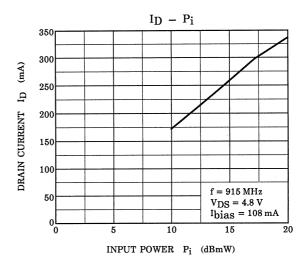
Please handle with caution.

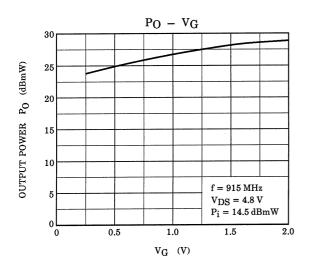
RF OUTPUT POWER TEST FIXTURE

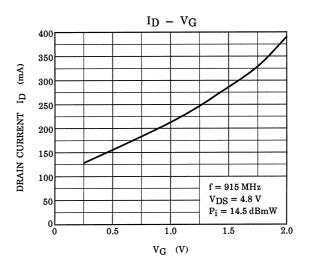


L1 : $\phi 0.6 \text{ mm}$, 5.5 mmID, 4T L2 : $\phi 0.6 \text{ mm}$, 5.5 mmID, 8T









CAUTION

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