

TOSHIBA FIELD EFFECT TRANSISTOR GaAs N-CHANNEL DUAL GATE MES TYPE

3SK284

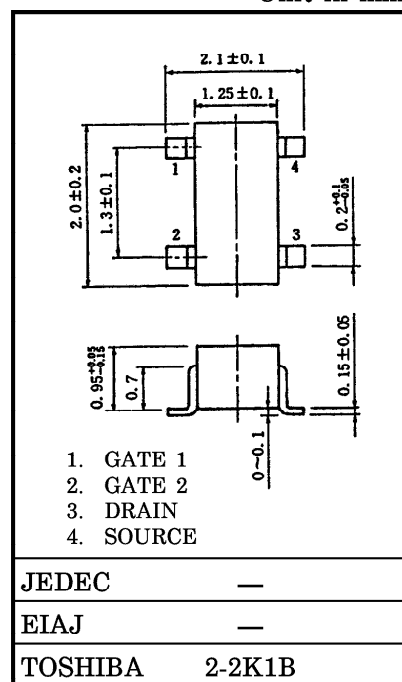
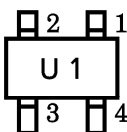
TV TUNER, UHF RF AMPLIFIER APPLICATIONS.

Unit in mm

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Gate 1-Drain Voltage	V _{G1DO}	-6	V
Gate 2-Drain Voltage	V _{G2DO}	-6	V
Gate 1-Source Voltage	V _{G1S}	-4	V
Gate 2-Source Voltage	V _{G2S}	-4	V
Gate 1 Current	I _{G1}	1	mA
Gate 2 Current	I _{G2}	1	mA
Power Dissipation	P _D	100	mW
Channel Temperature	T _{ch}	125	°C
Storage Temperature Range	T _{stg}	-55~125	°C

Marking



ELECTRICAL CHARACTERISTICS (Ta = 25°C)

Weight : 0.006g

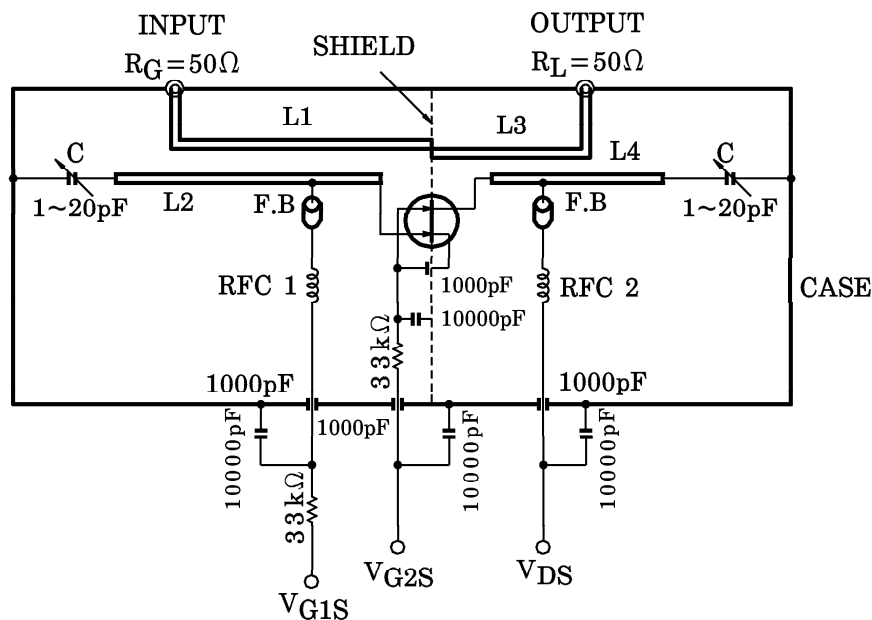
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate 1 Leakage Current	I _{G1SS}	V _{DS} =0, V _{G1S} =-3V, V _{G2S} =0	—	—	-4	μA
Gate 2 Leakage Current	I _{G2SS}	V _{DS} =0, V _{G1S} =0, V _{G2S} =-3V	—	—	-4	μA
Drain Current	I _{DSS}	V _{DS} =2V, V _{G1S} =0, V _{G2S} =0	4	—	16	mA
Gate 1-Source Cut-off Voltage	V _{G1S(OFF)}	V _{DS} =2V, V _{G2S} =0, I _D =100μA	-0.5	—	-1.5	V
Gate 2-Source Cut-off Voltage	V _{G2S(OFF)}	V _{DS} =2V, V _{G1S} =0, I _D =100μA	-0.5	—	-1.5	V
Forward Transfer Admittance	Y _{fs}	V _{DS} =2V, V _{G2S} =0.5V, I _D =2mA, f=1kHz	—	12	—	mS
Input Capacitance	C _{iss}	V _{DS} =2V, V _{G2S} =0.5V, I _D =2mA, f=1MHz	—	0.65	1.3	pF
Reverse Transfer Capacitance	C _{rss}		—	0.015	0.03	
Power Gain	G _{ps}	V _{DS} =2V, V _{G2S} =0.5V, I _D =2mA, f=800MHz (Fig.1)	15	18.5	—	dB
Noise Figure	NF		—	1.3	2.5	

CAUTION

GaAs (Gallium Arsenide) is used in this product. The dust or vapor can be dangerous to humans. Do not break, cut, crush or dissolve chemically. Dispose of this product properly according to law. Do not intermingle with normal industrial or domestic waste.

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FIG.1 800MHz G_{ps} , NF TEST CIRCUIT

L1~L4 : $\phi 1.0\text{mm}$ SILVER PLATED COPPER WIRE

C : AIR TRIMMER TTA25A200A (MURATA MFG. Co., LTD.)

RFC 1 : $\phi 0.35\text{mm}$ COPPER WIRE 3mm ID, 7T

RFC 2 : $\phi 0.35\text{mm}$ COPPER WIRE 3mm ID, 10T

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