

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

3SK283

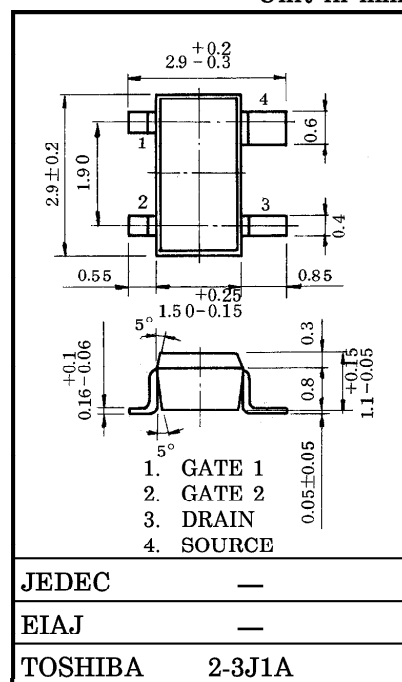
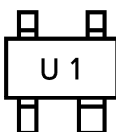
TV TUNER, UHF RF AMPLIFIER APPLICATIONS.

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	150	mW
Channel Temperature	T _{ch}	125	°C
Storage Temperature Range	T _{stg}	-55~125	°C

Marking



ELECTRICAL CHARACTERISTICS (Ta = 25°C)

Weight : 0.013g

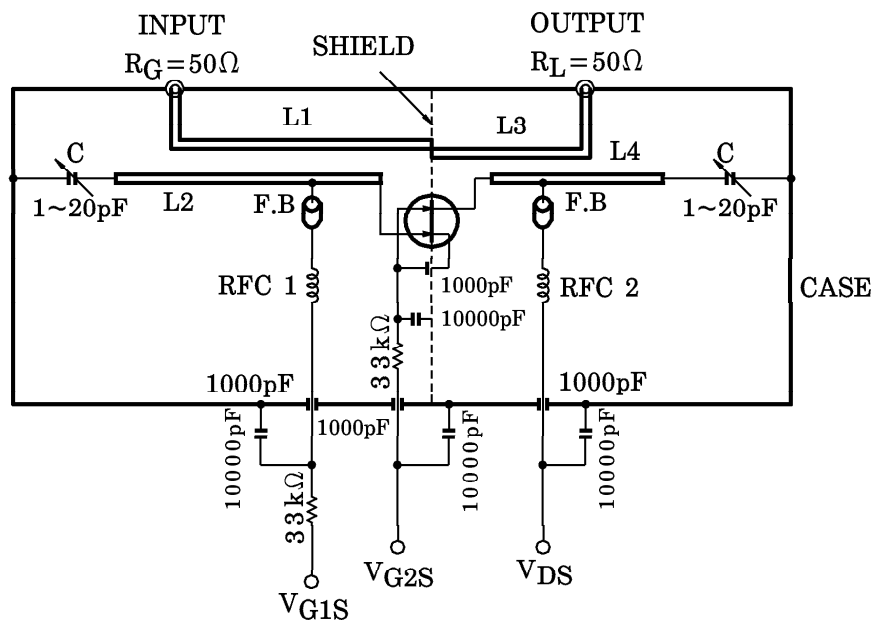
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate 1 Leakage Current	I _{G1SS}	V _{DS} =0, V _{G1S} =-3V, V _{G2S} =0	—	—	-4	μA
Gate 2 Leakage Current	I _{G2SS}	V _{DS} =0, V _{G1S} =0, V _{G2S} =-3V	—	—	-4	μA
Drain Current	I _{DSS}	V _{DS} =2V, V _{G1S} =0, V _{G2S} =0	4	—	16	mA
Gate 1-Source 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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- Gallium arsenide (GaAs) is a substance used in the products described in this document. GaAs dust and fumes are toxic. Do not break, cut or pulverize the product, or use chemicals to dissolve them. When disposing of the products, follow the appropriate regulations. Do not dispose of the products with other industrial waste or with domestic garbage.
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