

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

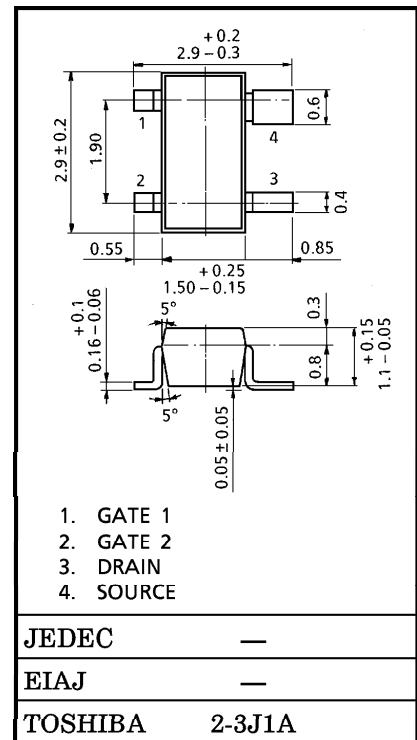
3SK283

TV TUNER, UHF RF AMPLIFIER APPLICATIONS

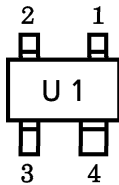
Unit in mm

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 = 100 μA	-0.5	—	-1.5	V
Gate 2-Source Cut-off Voltage	V _{G2S (OFF)}	V _{DS} = 2V, V _{G1S} = 0, I _D = 100 μA	-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	

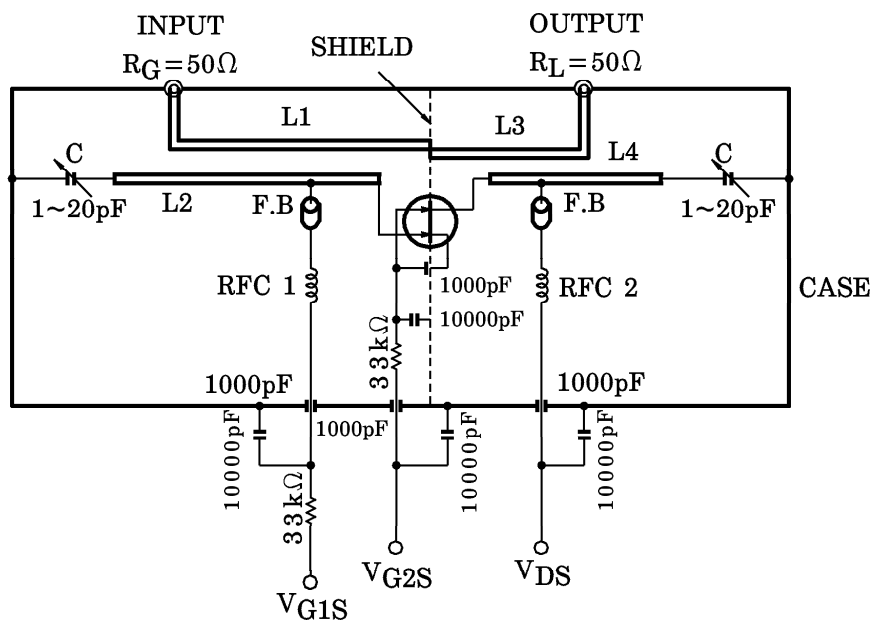
CAUTION

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 : ϕ 1.0mm SILVER PLATED COPPER WIRE

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

RFC 1 : ϕ 0.35mm COPPER WIRE 3mm ID, 7T

RFC 2 : ϕ 0.35mm COPPER WIRE 3mm ID, 10T

