

SILICON N CHANNEL DUAL GATE MOS TYPE

3SK102

TV TUNER,UHF RF AMPLIFIER APPLICATIONS.

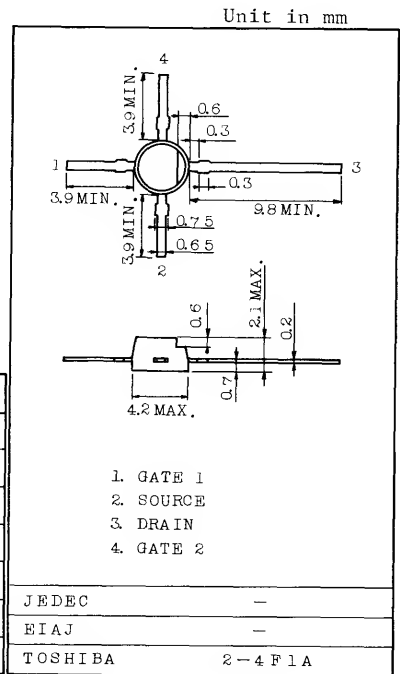
TV TUNER,UHF MIXER APPLICATIONS.

FEATURES:

- Superior Cross Modulation Performance.
- Low Reverse Transfer Capacitance : $C_{rss}=0.03\text{pF}(\text{Max.})$
- Low Noise Figure : $NF=4.0\text{dB}(\text{Typ.})$

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	V_{DS}	20	V
Gate1-Source Voltage	V_{G1S}	± 9	V
Gate2-Source Voltage	V_{G2S}	± 9	V
Drain Current	I_D	30	mA
Drain Power Dissipation	P_D	200	mW
Channel Temperature	T_{ch}	125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	$-55 \sim +125$	$^\circ\text{C}$



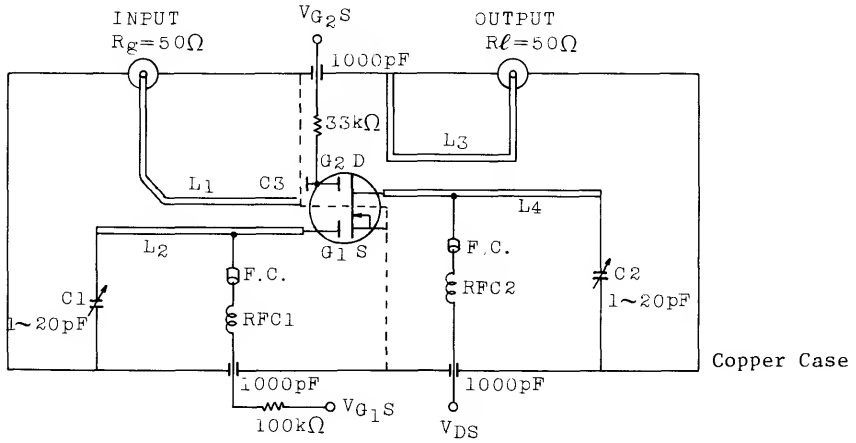
Weight : 0.08g

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate1 Leakage Current	I_{G1SS}	$V_{DS}=0, V_{G1S}=\pm 7V, V_{G2S}=0$	-	-	± 50	nA
Gate2 Leakage Current	I_{G2SS}	$V_{DS}=0, V_{G1S}=0, V_{G2S}=\pm 7V$	-	-	± 50	nA
Drain-Source Voltage	$V_{(BR)DSX}$	$V_{G1S}=-4V, V_{G2S}=-4V, I_D=100\mu\text{A}$	20	-	-	V
Drain Current	I_{DSS} (NOTE)	$V_{DS}=15V, V_{G1S}=0, V_{G2S}=4V$	3	-	24	mA
Gate1-Source Cut-off Voltage	$V_{G1S}(\text{OFF})$	$V_{DS}=15V, V_{G2S}=4V, I_D=100\mu\text{A}$	0	-	-3.5	V
Gate2-Source Cut-off Voltage	$V_{G2S}(\text{OFF})$	$V_{DS}=15V, V_{G1S}=0, I_D=100\mu\text{A}$	0	-	-3.5	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS}=15V, V_{G2S}=4V, I_D=10\text{mA}, f=1\text{kHz}$	8	-	-	mS
Input Capacitance	C_{iss}	$V_{DS}=15V, V_{G2S}=4V, I_D=10\text{mA}, f=1\text{MHz}$	-	1.7	-	pF
Reverse Transfer Capacitance	C_{rss}	$I_D=10\text{mA}, f=1\text{MHz}$	-	-	0.03	pF
Power Gain	G_{ps}	$V_{DS}=15V, V_{G2S}=4V, I_D=10\text{mA}, f=800\text{MHz}$	-	16	-	dB
Noise Figure	NF	(Fig.)	-	4.0	5.0	dB

Note : I_{DSS} Classification: Y:3.0~7.0 GR:6.0~14.0 BL:12.0~24.0 (mA)

Fig. Gps, NF TEST CIRCUIT



- L1~L4 ; 1.0mm ϕ SILVER PLATED COPPER WIRE
- RFC1 ; 0.35mm ϕ COPPER WIRE 7.0T 3mm ID
- RFC2 ; 0.35mm ϕ COPPER WIRE 10.0T 3mm ID
- C1, C2 ; AIR TRIMMER TTA25A200A MURATA MFG. CO., LTD. or EQUIVALENT
- C3 ; 1000pF DISC CAPACITOR
- F.C. ; FERRITE CORE

