

# 3SK160

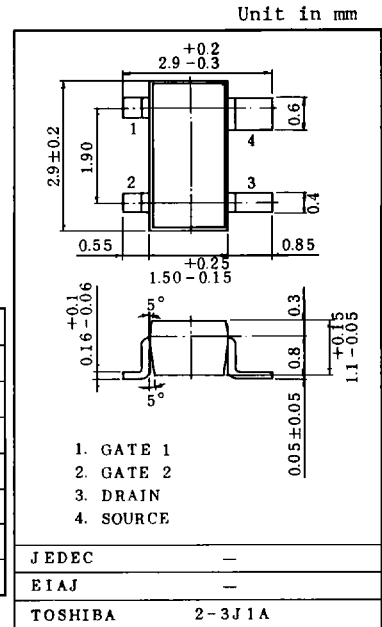
## SILICON N CHANNEL DUAL GATE MOS TYPE

TV TUNER, VHF RF AMPLIFIER APPLICATIONS.  
TV TUNER VHF MIXER APPLICATIONS.

- Superior Cross Modulation Performance.
- Low Noise Figure : NF=2.1dB(Typ.)

### MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	V <sub>DS</sub>	13.5	V
Gate 1 - Source Voltage	V <sub>G1S</sub>	±8	V
Gate 2 - Source Voltage	V <sub>G2S</sub>	±8	V
Drain Current	I <sub>D</sub>	30	mA
Drain Power Dissipation	P <sub>D</sub>	150	mW
Channel Temperature	T <sub>ch</sub>	125	°C
Storage Temperature Range	T <sub>stg</sub>	-55~125	°C



### ELECTRICAL CHARACTERISTICS (Ta=25°C)

Weight : 0.013g

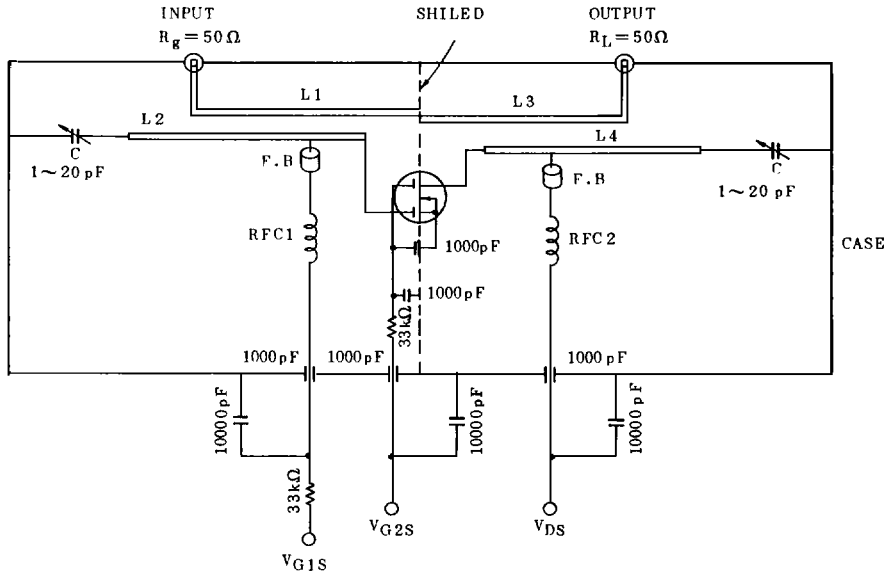
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate 1 Leakage Current	I <sub>G1SS</sub>	V <sub>DS</sub> =0, V <sub>G1S</sub> =±6V, V <sub>G2S</sub> =0	-	-	±50	nA
Gate 2 Leakage Current	I <sub>G2SS</sub>	V <sub>DS</sub> =0, V <sub>G1S</sub> =0, V <sub>G2S</sub> =±6V	-	-	±50	nA
Drain-Source Voltage	V <sub>(BR)DSX</sub>	V <sub>G1S</sub> =-4V, V <sub>G2S</sub> =-4V I <sub>D</sub> =100μA	13.5	-	-	V
Drain Current	I <sub>DSS</sub> (Note)	V <sub>DS</sub> =6V, V <sub>G1S</sub> =0, V <sub>G2S</sub> =3V	0	-	6	mA
Gate 1-Source Cut-off Voltage	V <sub>G1S(OFF)</sub>	V <sub>DS</sub> =6V, V <sub>G2S</sub> =3V, I <sub>D</sub> =100μA	-1.5	-	1	V
Gate 2-Source Cut-off Voltage	V <sub>G2S(OFF)</sub>	V <sub>DS</sub> =6V, V <sub>G1S</sub> =3V, I <sub>D</sub> =100μA	-1.0	-	1	V
Forward Transfer Admittance	Y <sub>fs</sub>	V <sub>DS</sub> =6V, V <sub>G2S</sub> =3V I <sub>D</sub> =10mA, f=1kHz	-	18	-	mS
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =6V, V <sub>G2S</sub> =3V	-	3.4	4.4	pF
Reverse Transfer Capacitance	C <sub>rss</sub>	I <sub>D</sub> =10mA, f=1MHz	-	0.035	0.05	pF
Power Gain	G <sub>ps</sub>	V <sub>DS</sub> =6V, V <sub>G2S</sub> =3V	14.5	18	-	dB
Noise Figure	NF	I <sub>D</sub> =10mA, f=500MHz(Fig.1)	-	2.1	3.5	dB

Note: I<sub>DSS</sub> Classification 0 : 0~2mA, Y : 1~6mA

Marking



Fig. 1 500MHz Gps, NF TEST CIRCUIT



L1~L4 : 0.8mm SILVER PLATED COPPER WIRE

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

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

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

