

**TOSHIBA**

**2SK881**

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL JUNCTION TYPE

# 2SK881

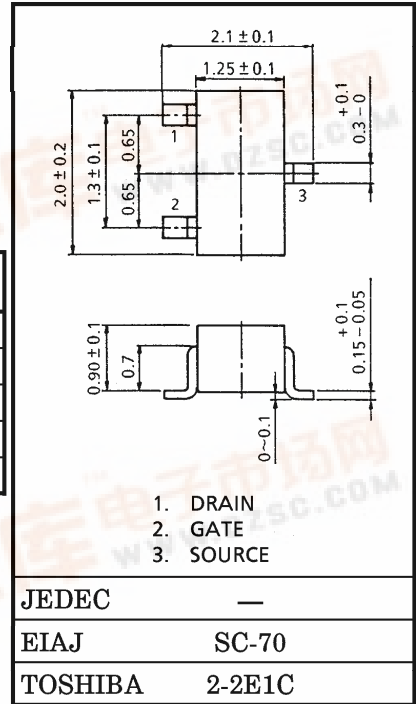
FM TUNER APPLICATIONS  
VHF BAND AMPLIFIER APPLICATIONS

Unit in mm

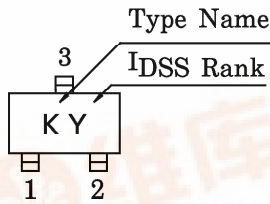
- Low Noise Figure :  $NF=2.5\text{dB}$  (Typ.) ( $f=100\text{MHz}$ )
- High Forward Transfer Admittance :  $|Y_{fs}|=9\text{mS}$  (Typ.)

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Gate-Drain Voltage	$V_{GDO}$	-18	V
Gate Current	$I_G$	10	mA
Drain Power Dissipation	$P_D$	100	mW
Junction Temperature	$T_j$	125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55~125	$^\circ\text{C}$



Marking



Weight : 0.006g

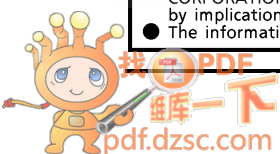
ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

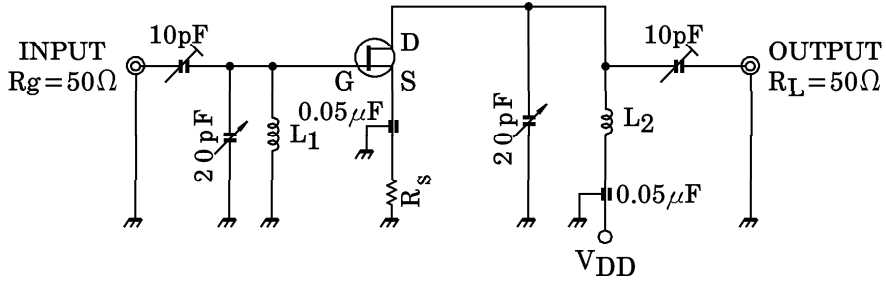
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	$I_{GSS}$	$V_{GS} = -0.5\text{V}, V_{DS} = 0$	—	—	-10	nA
Gate-Drain Breakdown Voltage	$V_{(BR)GDO}$	$I_G = -10\mu\text{A}$	-18	—	—	V
Drain Current	$I_{DSS}$ (Note)	$V_{GS} = 0, V_{DS} = 10\text{V}$	1.0	—	10	mA
Gate-Source Cut-off Voltage	$V_{GS(OFF)}$	$V_{DS} = 10\text{V}, I_D = 1\mu\text{A}$	-0.4	—	-4.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{GS} = 0, V_{DS} = 10\text{V}, f = 1\text{kHz}$	—	9	—	mS
Input Capacitance	$C_{iss}$	$V_{DS} = 10\text{V}, V_{GS} = 0, f = 1\text{MHz}$	—	6.0	—	pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = 10\text{V}, V_{GS} = 0, f = 1\text{MHz}$	—	—	0.15	pF
Power Gain	$G_{ps}$	$V_{DD} = 10\text{V}, f = 100\text{MHz}$ (Fig.1)	10	18	—	dB
Noise Figure	NF	$V_{DD} = 10\text{V}, f = 100\text{MHz}$ (Fig.1)	—	2.5	3.5	dB

Note :  $I_{DSS}$  Classification    O : 1.0~3.0,    Y : 2.5~6.0,    GR : 5.0~10.0

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L<sub>1</sub> : 0.8mmφ Ag PLATED Cu WIRE, 3. TURNS, 10mm ID, 10mm LENGTH.  
 L<sub>2</sub> : 0.8mmφ Ag PLATED Cu WIRE, 3.5 TURNS, 10mm ID, 10mm LENGTH.

Fig.1 100MHz Gps, NF TEST CIRCUIT

2SK881 is measured at each group by changing R<sub>S</sub>.

GROUP	R <sub>S</sub> (Ω)
2SK881-O	0
2SK881-Y	18Ω ± 5%
2SK881-GR	100Ω ± 5%

