

MOS FIELD EFFECT TRANSISTOR

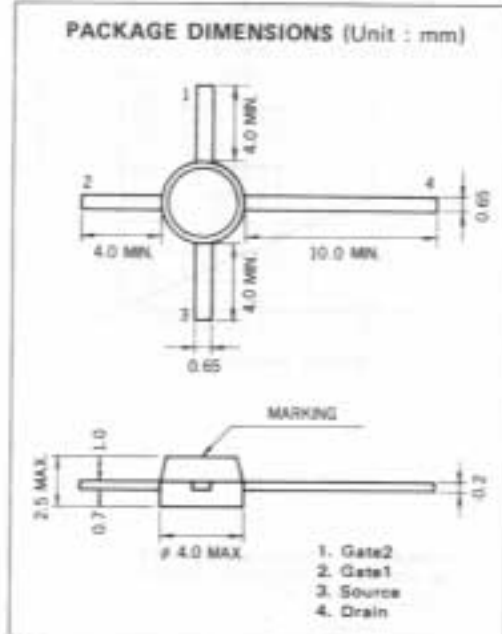
3SK88A

- FEATURES**
- Suitable for use as RF amplifier in UHF TV tuner.
 - Low C_{rss} : 0.02 pF TYP.
 - High G_{ps} : 17.0 dB TYP.
 - Low NF : 3.2 dB TYP.

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

V_{DSX}	Drain to Source Voltage	20	V
V_{G1S}	Gate1 to Source Voltage	$\pm 8 (\pm 10)^*$	V
V_{G2S}	Gate2 to Source Voltage	$\pm 8 (\pm 10)^*$	V
I_D	Drain Current	25	mA
P_T	Total Power Dissipation	200	mW
T_{ch}	Channel Temperature	125	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55 to +125	$^\circ\text{C}$

* $R_L \geq 10\text{ k}\Omega$



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

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
BV_{DSX}	Drain to Source Breakdown Voltage	20			V	$V_{G1S} = V_{G2S} = -2\text{ V}, I_D = 10\ \mu\text{A}$
I_{DSS}	Drain Current	0.01		6	mA	$V_{DS} = 10\text{ V}, V_{G2S} = 4\text{ V}, V_{G1S} = 0$
$V_{G1S(off)}$	Gate1 to Source Cutoff Voltage			-2.0	V	$V_{DS} = 10\text{ V}, V_{G2S} = 4\text{ V}, I_D = 10\ \mu\text{A}$
$V_{G2S(off)}$	Gate2 to Source Cutoff Voltage			-0.7	V	$V_{DS} = 10\text{ V}, V_{G1S} = 4\text{ V}, I_D = 10\ \mu\text{A}$
I_{G1SS}	Gate1 Reverse Current			± 20	nA	$V_{DS} = 0, V_{G1S} = \pm 10\text{ V}, V_{G2S} = 0$
I_{G2SS}	Gate2 Reverse Current			± 20	nA	$V_{DS} = 0, V_{G2S} = \pm 10\text{ V}, V_{G1S} = 0$
$ y_{fs} $	Forward Transfer Admittance	14	17		mS	$V_{DS} = 5\text{ V}, V_{G2S} = 4\text{ V}, I_D = 10\text{ mA}$ $f = 1\text{ kHz}$
C_{iss}	Input Capacitance	1.5	2.0	2.5	pF	$V_{DS} = 10\text{ V}, V_{G2S} = 4\text{ V}, I_D = 10\text{ mA}$ $f = 1\text{ MHz}$
C_{oss}	Output Capacitance	0.5	1.0	1.5	pF	
C_{rss}	Reverse Transfer Capacitance		0.02	0.03	pF	
G_{ps}^{**}	Power Gain	15.0	17.0		dB	$V_{DS} = 10\text{ V}, V_{G2S} = 4\text{ V}, I_D = 10\text{ mA}$
NF**	Noise Figure		3.2	5.0	dB	$f = 900\text{ MHz}$

I_{DSS} Classification

Marking	L	K
I_{DSS}	0.01 to 2	1 to 6

UNIT : mA

**See Test Circuit