

# MOS FIELD EFFECT TRANSISTOR

## 3SK88A

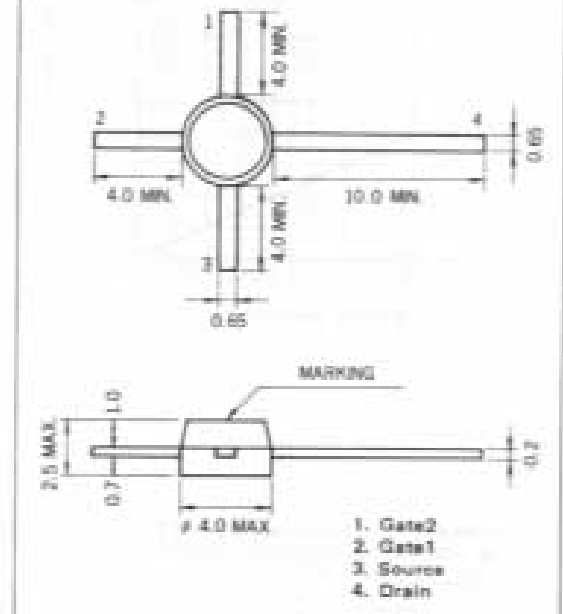
- FEATURES**
- Suitable for use as RF amplifier in UHF TV tuner.
  - Low  $C_{rss}$  : 0.02 pF TYP.
  - High  $G_{ps}$  : 17.0 dB TYP.
  - Low NF : 3.2 dB TYP.

### 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	$^\circ\text{C}$

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

### PACKAGE DIMENSIONS (Unit : mm)



### 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			$\pm 20$	nA	$V_{DS} = 0$ , $V_{G1S} = \pm 10\text{ V}$ , $V_{G2S} = 0$
$I_{G2SS}$	Gate2 Reverse Current			$\pm 20$	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 5

UNIT : mA

\*\*See Test Circuit