

JUNCTION FIELD EFFECT TRANSISTOR

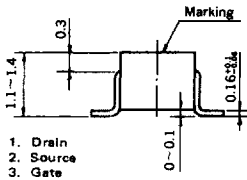
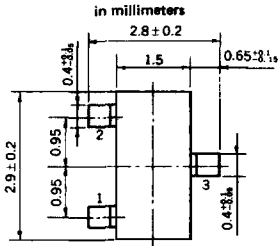
2SK508

HIGH FREQUENCY AMPLIFIER

N-CHANNEL SILICON JUNCTION FIELD EFFECT TRANSISTOR

MINI MOLD

PACKAGE DIMENSIONS



FEATURES

- Low C_{iss} : $C_{iss} = 4.8$ pF TYP.
- High $|y_{fs}|$: $|y_{fs}| = 26$ mS TYP.

ABSOLUTE MAXIMUM RATINGS

Maximum Voltages and Currents ($T_a = 25^\circ\text{C}$)

Gate to Drain Voltage	V_{GD0}	-15	V
Gate to Source Voltage	V_{GSO}	-15	V
Drain to Source Voltage ($V_{GS} = -4.0$ V)	V_{DSX}	15	V
Drain Current (DC)	I_D	50	mA
Gate Current (DC)	I_G	5	mA

Maximum Power Dissipation

Total Power Dissipation at 25°C Ambient Temperature	P_T	200	mW
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Maximum Temperatures

Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

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

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Gate Cutoff Current	I_{GSS}			-1.0	nA	$V_{GS} = -10$ V, $V_{DS} = 0$
Zero-Gate Voltage Drain Current	I_{DSS}^*	10	20	50	mA	$V_{DS} = 5.0$ V, $V_{GS} = 0$
Gate to Source Cutoff Voltage	$V_{GS(off)}$	-0.6	-1.4	-3.5	V	$V_{DS} = 5.0$ V, $I_D = 10$ μA
Forward Transfer Admittance	$ y_{fs} 1^*$	14	19		mS	$V_{DS} = 5.0$ V, $I_D = 10$ mA, $f = 1.0$ kHz
Forward Transfer Admittance	$ y_{fs} 2^*$	14	26		mS	$V_{DS} = 5.0$ V, $V_{GS} = 0$, $f = 1.0$ kHz
Input Capacitance	C_{iss}		4.8		pF	$V_{DS} = 5.0$ V, $I_D = 10$ mA, $f = 1.0$ MHz
Feedback Capacitance	C_{rss}		1.6		pF	$V_{DS} = 5.0$ V, $I_D = 10$ mA, $f = 1.0$ MHz

* Pulsed: $PW \leq 1$ ms, Duty Cycle $\leq 1\%$

I_{DSS} Classification

Marking	K51	K52	K53
I_{DSS} (mA)	10 to 20	15 to 30	25 to 50

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

