

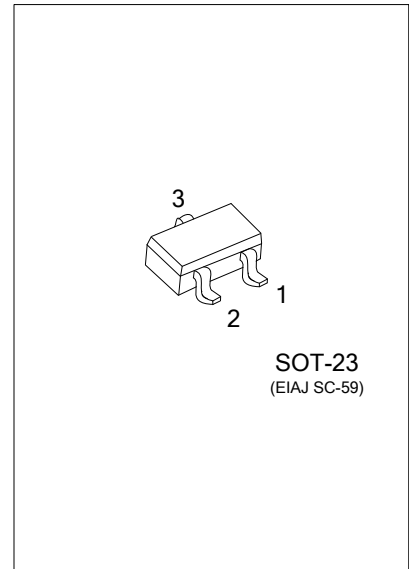


## 2SK508

Preliminary

**NPN EPITAXIAL SILICON TRANSISTOR**

### HIGH FREQUENCY AMPLIFIER N-CHANNEL SILICON JUNCTION FIELD EFFECT TRANSISTOR



#### DESCRIPTION

The UTC **2SK508** is NPN transistor with High forward transfer admittance and low input capacitance.

It is suitable for cordless telephone, AM tuner and wireless installation, etc.

#### FEATURES

- \* High forward transfer admittance
- \* Low input capacitance

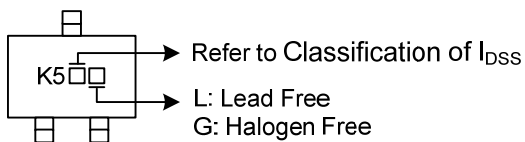
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SK508L-x-AE3-R	2SK508G-x-AE3-R	SOT-23	D	S	G	Tape Reel

Note: Pin Assignment: D: Drain S: Source G: Gate

<p>2SK508L-x-AE3-R</p>	<p>(1) R: Tape Reel (2) AE3: SOT-23 (3) x: Refer to Classification of I<sub>DSS</sub> (4) G: Halogen Free, L: Lead Free</p>
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#### MARKING



■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Gate to Drain Voltage	$V_{GDO}$	-15	V
Gate to Source Voltage	$V_{GSO}$	-15	V
Drain to Source Voltage ( $V_{GS}=-4.0\text{ V}$ )	$V_{DSX}$	15	V
Drain Current (DC)	$I_D$	50	mA
Gate Current (DC)	$I_G$	5	mA
Power Dissipation	$P_D$	200	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55~+150	$^\circ\text{C}$

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Gate Cut-Off Current	$I_{GSS}$	$V_{GS}=-10\text{V}$ , $V_{DS}=0\text{V}$			-1.0	nA
Zero Gate Voltage Drain Current (Note 1)	$I_{DSS}$	$V_{DS}=5.0\text{V}$ , $V_{GS}=0\text{V}$	10	20	50	mA
Gate to Source Cut-Off Voltage	$V_{GS(off)}$	$V_{DS}=5.0\text{V}$ , $I_D=10\mu\text{A}$	-0.6	-1.4	-3.5	V
Forward Transfer Admittance (Note 1)	$ y_{FS} 1$	$V_{DS}=5.0\text{V}$ , $I_D=10\text{mA}$ , $f=1.0\text{kHz}$	14	19		mS
	$ y_{FS} 2$	$V_{DS}=5.0\text{V}$ , $V_{GS}=0\text{V}$ , $f=1.0\text{kHz}$	14	26		mS
Input Capacitance	$C_{ISS}$	$V_{DS}=5.0\text{V}$ , $I_D=10\text{mA}$ , $f=1.0\text{MHz}$		4.8		pF
Feedback Capacitance	$C_{RSS}$	$V_{DS}=5.0\text{V}$ , $I_D=10\text{mA}$ , $f=1.0\text{MHz}$		1.6		pF

Note: 1. Pulsed:  $P_w \leq 1\text{ms}$ , Duty Cycle  $\leq 1\%$

■  $I_{DSS}$  CLASSIFICATION

MARKING	K51	K52	K53
$I_{DSS}$ (mA)	10 ~ 20	15 ~ 30	25 ~ 50

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