

HIGH FREQUENCY AMPLIFIER N-CHANNEL SILICON JUNCTION FIELD EFFECT TRANSISTOR

DESCRIPTION

- The **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.

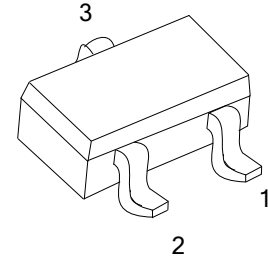
FEATURES

- High forward transfer admittance
- Low input capacitance

ORDERING INFORMATION

Ordering Number	Package	Pin Assignment			Packing
		1	2	3	
2SK508	SOT-23	D	S	G	Tape Reel

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



SOT-23
(EIAJ TO-236)

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)

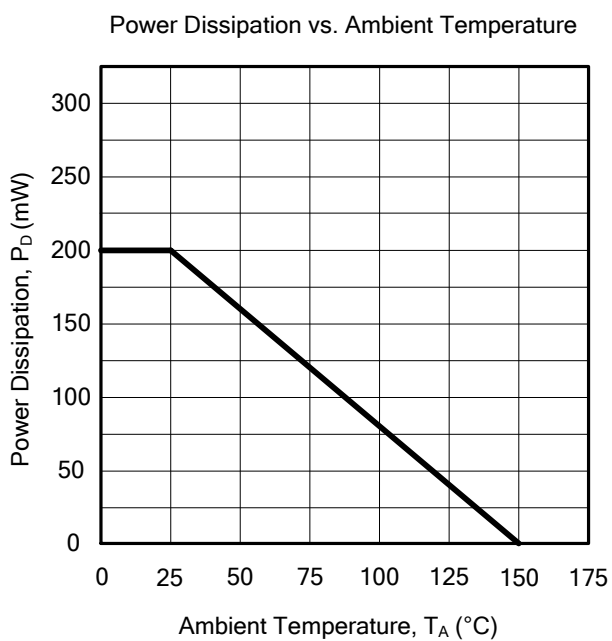
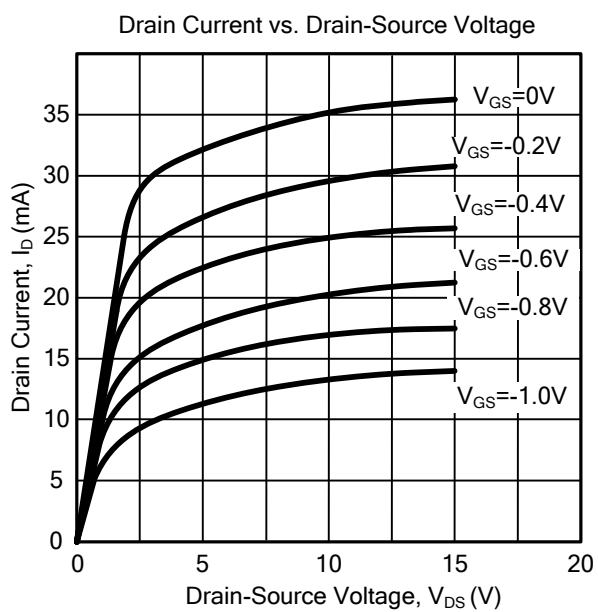
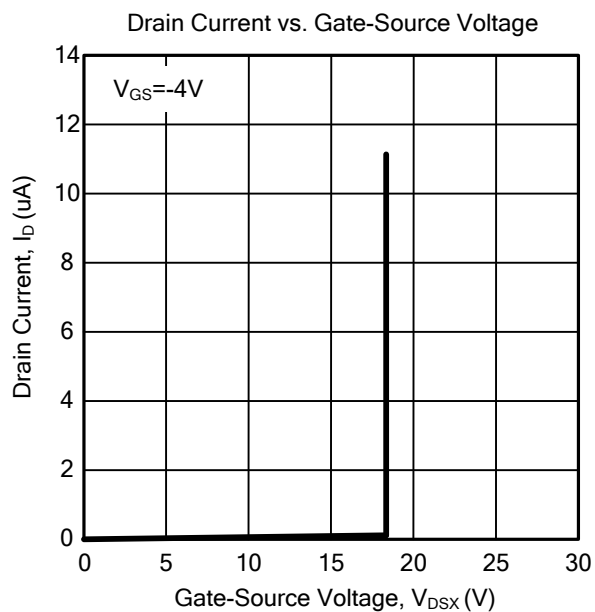
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Gate Cut-Off Current	I_{GSS}	$V_{GS} = -10\text{V}, V_{DS} = 0\text{V}$			-1.0	nA
Zero Gate Voltage Drain Current (Note)	I_{DSS}	$V_{DS} = 5.0\text{V}, V_{GS} = 0\text{V}$	10	20	50	mA
Gate to Source Cut-Off Voltage	$V_{GS(off)}$	$V_{DS} = 5.0\text{V}, I_D = 10\mu\text{A}$	-0.6	-1.4	-3.5	V
Forward Transfer Admittance (Note)	$ 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: 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

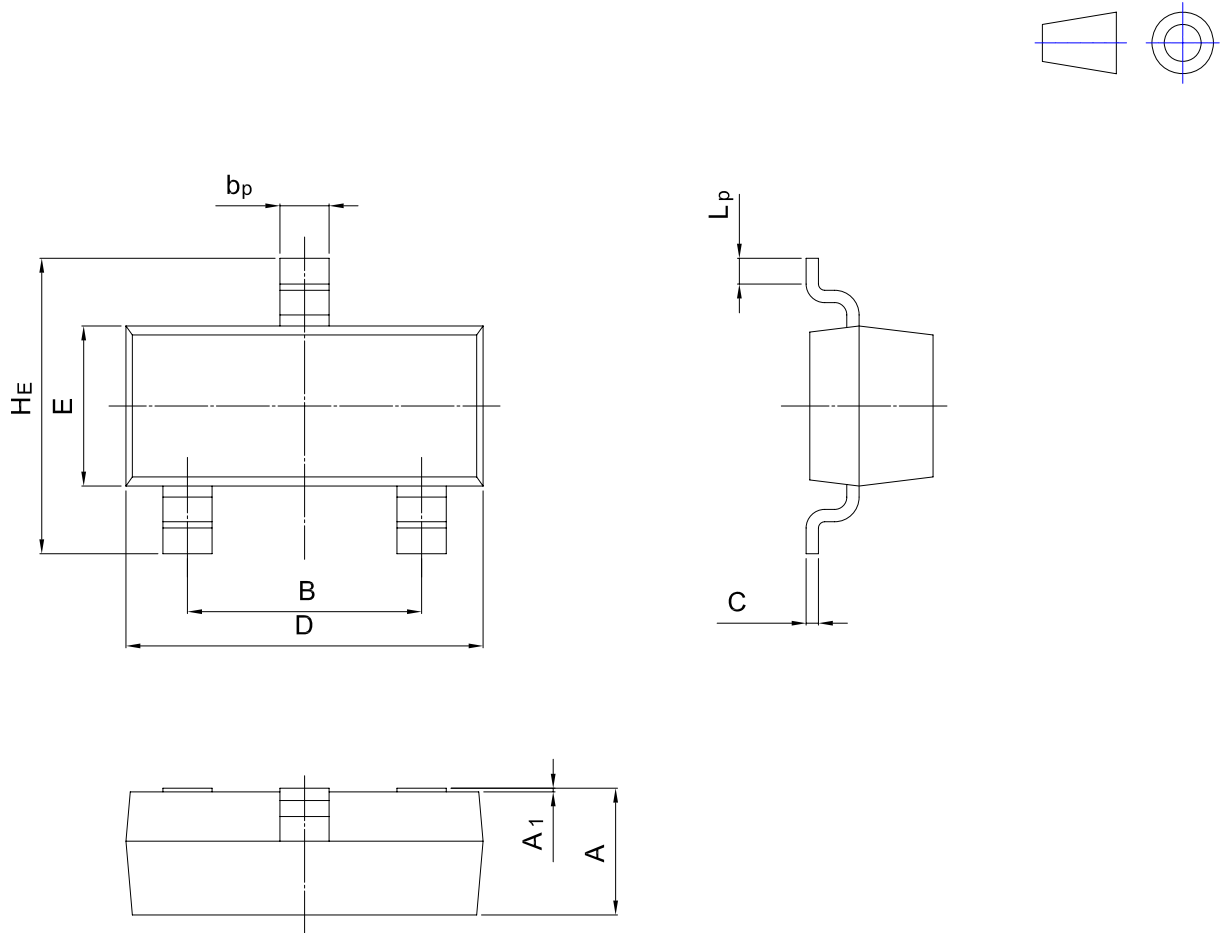
TYPICAL CHARACTERISTICS



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50
	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20