



## N-CHANNEL JUNCTION SILICON FET

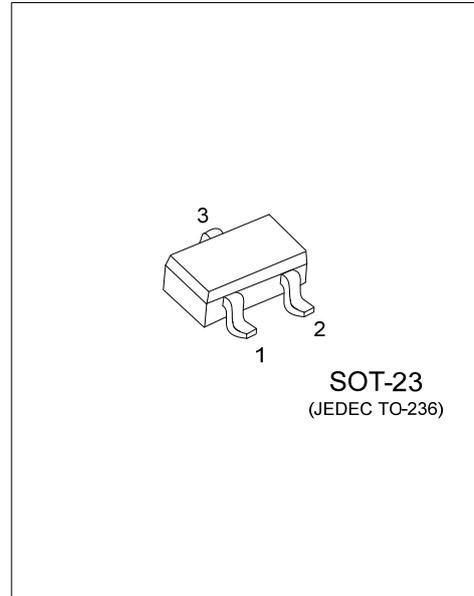
### DESCRIPTION

The UTC **2SK3666** is an N-channel junction silicon FET, it uses UTC's advanced technology to provide the customers with low  $I_{GSS}$  and low  $C_{RSS}$ .

The UTC **2SK3666** is suitable for low-frequency general-purpose amplifier, impedance conversion, infrared sensor applications.

### FEATURES

- \* Low  $I_{GSS}$
- \* Low  $C_{RSS}$



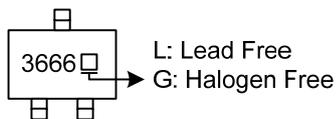
### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SK3666L-x-AE3-R	2SK3666G-x-AE3-R	SOT-23	S	D	G	Tape Reel

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

<p>2SK3666G-x-AE3-R</p>	<p>(1) R: Tape Reel  (2) AE3: SOT-23  (3) x: refer to Classification of <math>I_{DSS}</math>  (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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### MARKING



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

PARAMETER	SYMBOL	RATINGS	UNIT
Drain-Source Voltage	$V_{DSS}$	30	V
Gate-Drain Voltage	$V_{GDS}$	-30	V
Gate Current	$I_G$	10	mA
Drain Current	$I_D$	10	mA
Power Dissipation	$P_D$	200	mW
Junction Temperature	$T_J$	+150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-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 ( $T_c=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
<b>OFF CHARACTERISTICS</b>						
Gate-Drain Breakdown Voltage	$V_{(BR)GDS}$	$I_G=-10\mu\text{A}$ , $V_{DS}=0\text{V}$	-30			V
Drain-Source Leakage Current	$I_{DSS}$	$V_{DS}=10\text{V}$ , $V_{GS}=0\text{V}$	0.6		6.0	mA
Gate-Source Leakage Current	$I_{GSS}$	$V_{GS}=-20\text{V}$ , $V_{DS}=0\text{V}$			-1.0	nA
Forward Transfer Admittance	$ y_{fs} $	$V_{GS}=0\text{V}$ , $V_{DS}=10\text{V}$ , $f=1\text{kHz}$	3.0	6.5		mS
<b>ON CHARACTERISTICS</b>						
Cutoff Voltage	$V_{GS(OFF)}$	$V_{DS}=10\text{V}$ , $I_D=1\mu\text{A}$	-0.18	-0.95	-2.2	V
Static Drain-Source On-State Resistance	$R_{DS(ON)}$	$V_{GS}=0\text{V}$ , $V_{DS}=10\text{mV}$		270		$\Omega$
<b>DYNAMIC PARAMETERS</b>						
Input Capacitance	$C_{ISS}$	$V_{GS}=0\text{V}$ , $V_{DS}=10\text{V}$ , $f=1.0\text{MHz}$		4		pF
Reverse Transfer Capacitance	$C_{RSS}$			1.1		pF

■ CLASSIFICATION OF  $I_{DSS}$

RANK	2	3	4
RANGE	0.6 ~ 1.5	1.2 ~ 3.0	2.5 ~ 6.0

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