

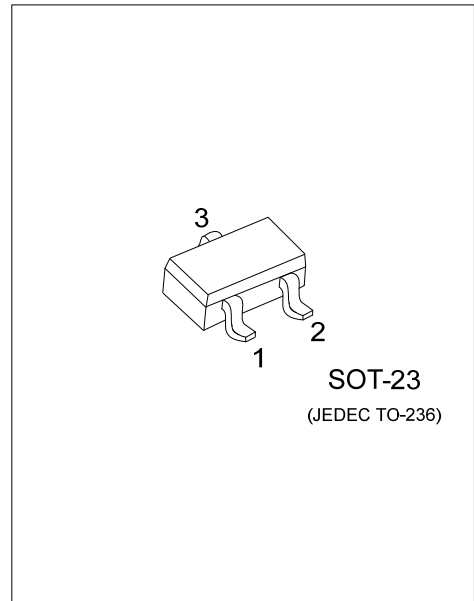


## 2SK3557

Preliminary

JFET

### FIELD EFFECT TRANSISTOR SILICON N-CHANNEL JUNCTION TYPE



#### DESCRIPTION

The UTC **2SK3557** 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 **2SK3557** is suitable for audio frequency low noise amplifier, impedance conversion, infrared sensor applications.

#### FEATURES

- \* Small Ciss
- \* Ultralow Noise Figure
- \* High breakdown voltage:  $V_{GDS} = -15V$
- \* High input impedance:  $I_{GSS} = -1nA$  (max) at  $V_{GS} = -10V$

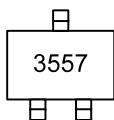
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SK3557L-x-AE3-R	2SK3557G-x-AE3-R	SOT-23	S	D	G	Tape Reel

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

<p>2SK3557G-x-AE3-R</p> <p>(1)Packing Type (2)Package Type (3)Rank (4)Green Package</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	$V_{DSX}$	15	V
Gate-Drain Voltage	$V_{GDS}$	-15	V
Gate Current	$I_G$	10	mA
Drain Current	$I_D$	50	mA
Power Dissipation	$P_D$	200	mW
Junction Temperature	$T_J$	+150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 ~ +125	$^\circ\text{C}$

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 Cut-off Current	$I_{GSS}$	$V_{GS}=-10\text{V}$ , $V_{DS}=0\text{V}$			-1.0	nA
Gate-Drain Breakdown Voltage	$V_{(BR)GDS}$	$I_G=-10\mu\text{A}$ , $V_{DS}=0\text{V}$	-15			V
Drain-Source Leakage Current	$I_{DSS}$	$V_{DS}=5\text{V}$ , $V_{GS}=0\text{V}$	10		32	mA
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=5\text{V}$ , $V_{GS}=0\text{V}$ , $f=1\text{kHz}$	24	35		mS
<b>ON CHARACTERISTICS</b>						
Cutoff Voltage	$V_{GS(OFF)}$	$V_{DS}=5\text{V}$ , $I_D=100\mu\text{A}$	-0.3	-0.7	-1.5	V
<b>DYNAMIC PARAMETERS</b>						
Input Capacitance	$C_{ISS}$	$V_{DS}=5\text{V}$ , $V_{GS}=0\text{V}$ , $f=1\text{MHz}$		12		pF
Reverse Transfer Capacitance	$C_{RSS}$	$V_{DG}=5\text{V}$ , $I_D=0\text{A}$ , $f=1\text{MHz}$		6		Pf
Noise Figure	NF	$V_{DG}=5\text{V}$ , $R_G=1\text{k}\Omega$ , $I_D=1\text{mA}$ , $f=1\text{MHz}$		1		dB

■ CLASSIFICATION OF  $I_{DSS}$

RANK	6	7
RANGE	10 ~ 20	16 ~ 32

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