



2SK3557

Preliminary

JFET

FIELD EFFECT TRANSISTOR SILICON N-CHANNEL JUNCTION TYPE

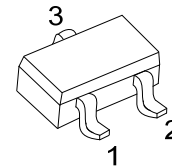
DESCRIPTION

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 $V_{GS} = -10V$



SOT-23
(JEDEC TO-236)

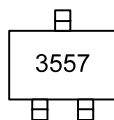
ORDERING INFORMATION

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>		(1) R: Tape Reel (2) AE3: SOT-23 (3) x: refer to Classification of I_{DSS} (4) G: Halogen Free and Lead Free, L: Lead Free
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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	$^\circ\text{C}$
Operating Temperature Range	T_{OPR}	-40 ~ +125	$^\circ\text{C}$
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
OFF CHARACTERISTICS						
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
ON CHARACTERISTICS						
Cutoff Voltage	$V_{GS(OFF)}$	$V_{DS}=5\text{V}$, $I_D=100\mu\text{A}$	-0.3	-0.7	-1.5	V
DYNAMIC PARAMETERS						
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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