

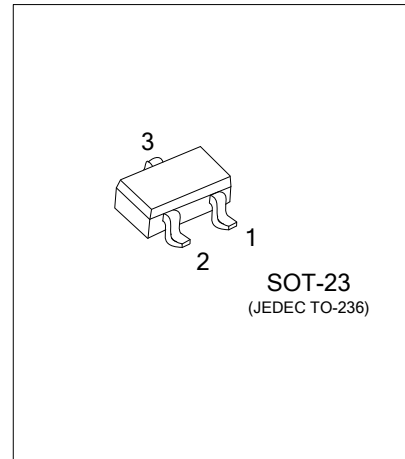


2SK545

Preliminary

JFET

# IMPEDANCE CONVERTER APPLICATIONS



## DESCRIPTION

The UTC **2SK545** is an N-channel Junction field effect transistor. It uses UTC's advanced technology to provide customers low  $C_{iss}$  and low  $I_{GSS}$ .

The UTC **2SK545** is suitable for infrared sensor and impedance converter applications.

## FEATURES

- \* Low Input Capacitance
- \* Low Gate-Source Leakage Current

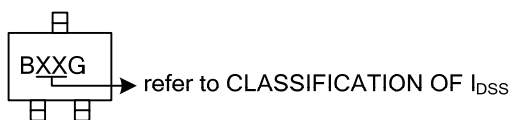
## ORDERING INFORMATION

Ordering Number	Package	Pin Assignment			Packing
		1	2	3	
2SK545G-xx-AE3-R	SOT-23	D	S	G	Tape Reel

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

<p>2SK545G-xx-AE3-R</p>	<p>(1) R: Tape Reel  (2) AE3: SOT-23  (3) xx: refer to Classification of <math>I_{DSS}</math>  (4) G: Halogen Free and Lead Free</p>
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## MARKING



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

PARAMETER	SYMBOL	RATINGS	UNIT
Drain-Source Voltage	$V_{DSS}$	40	V
Gate-Drain Voltage	$V_{GDS}$	-40	V
Gate Current	$I_G$	10	mA
Drain Current	$I_D$	1	mA
Power Dissipation	$P_D$	125	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-to-Drain Breakdown Voltage	$V_{(BR)GDS}$	$I_D=-10\mu\text{A}$ , $V_{DS}=0\text{V}$	-40			V
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS}=-20\text{V}$ , $V_{DS}=0\text{V}$			-500	pA
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=10\text{V}$ , $V_{GS}=0\text{V}$	30		300	$\mu\text{A}$
Cutoff Voltage	$V_{GS(OFF)}$	$V_{DS}=10\text{V}$ , $I_D=1\mu\text{A}$		-1.5	-4.0	V
Forward Transfer Admittance	$ y_{fs} $	$V_{GS}=0\text{V}$ , $V_{DS}=10\text{V}$ , $f=1.0\text{KHz}$	0.05	0.13		mS
Input Capacitance	$C_{ISS}$	$V_{GS}=0\text{V}$ , $V_{DS}=10\text{V}$ , $f=1.0\text{MHz}$		1.7		pF
Reverse Transfer Capacitance	$C_{RSS}$			0.7		pF

■ CLASSIFICATION OF  $I_{DSS}$

RANK	B10	B11	B12
RANGE	30~80	60~180	150~300

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