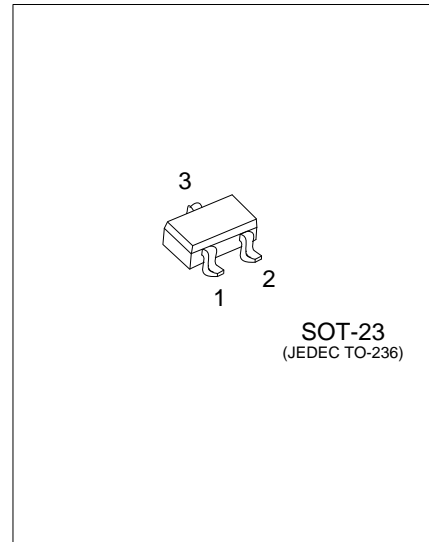




### ULTRA LOW CLAMPING BI-DIRECTIONAL ESD TRANSIENT PROTECTION DIODE



#### DESCRIPTION

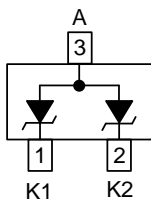
The UTC **UESD5V0UC500** is ultra-low clamping ESD transient bidirectional protection diode, it uses UTC's advanced technology to provide customers with low leakage current and high integration, etc.

The UTC **UESD5V0UC500** is suitable for ESD protection and high density boards.

#### FEATURES

- \* Bi-directional, symmetrical working voltage
- \* Ultra low clamping voltage
- \* Ultra low dynamic resistance

#### SYMBOL



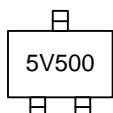
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UESD5V0UC500L-AE3-R	UESD5V0UC500G-AE3-R	SOT-23	K1	K2	A	Tape Reel

Note: Pin Assignment: K: Cathode A: Anode

UESD5V0UC500G-AE3-R	(1) Packing Type	(1) R: Tape Reel
	(2) Package Type	(2) AE3: SOT-23
	(3) Green Package	(3) G: Halogen Free and Lead Free, L: Lead Free

#### MARKING



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

PARAMETER		SYMBOL	RATINGS	UNIT	
ESD Discharge	IEC61000-4-2	Air Discharge	$\pm 30$	kV	
		Contact Discharge	$\pm 15$	kV	
Peak Pulse Current	IEC61000-4-5	$t_p=8/20 \mu\text{s}$	$I_{PP}$	47	A
Peak Pulse Power			$P_{PK}$	400	W
Operating Junction Temperature		$T_J$	+150	$^\circ\text{C}$	
Operating Temperature		$T_{OPR}$	-55 ~ +125	$^\circ\text{C}$	
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
Reverse Stand-Off Voltage	$V_{RWM}$				5.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_R=1\text{mA}$	6.0		7.3	V
Reverse Current	$I_R$	$V_R=5.0\text{V}$			1.0	$\mu\text{A}$
Clamping Voltage (positive transient)	$V_{CL}$	$I_{PP}=47\text{A}$ , $t_p=8/20\mu\text{s}$ , Any Channel pin to Ground			21.5	V
Diode capacitance	$C_d$	$V_R=0\text{V}$ , $f=1\text{MHz}$			500	pF
		$V_R=5\text{V}$ , $f=1\text{MHz}$			250	pF

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