



## UESD5V0V2U

Advance

TVS

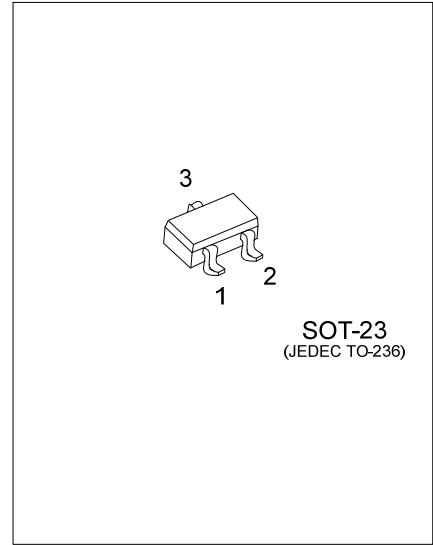
### ESD PROTECTION DIODE

#### DESCRIPTION

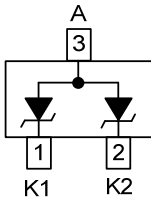
The UTC **UESD5V0V2U** is ElectroStatic Discharge (ESD), protection diode in leadless ultra small Surface-Mounted Device (SMD) plastic package designed to protect one signal line from the damage caused by ESD and other transients.

#### FEATURES

- \* Low capacitance  $C_D=0.8\text{pF}$
- \* Uni-directional, symmetrical working voltage up to :  $V_{RWM}=5\text{V}$
- \* Low reverse current :  $< 100\text{nA}$  typical ( $V_R=5\text{V}$ )
- \* IEC61000-4-2(ESD) : Air mode 30kV / Contact mode 30kV



#### SYMBOL



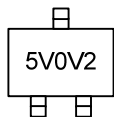
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UESD5V0V2UL-AE3-R	UESD5V0V2UG-AE3-R	SOT-23	K1	K2	A	Tape Reel

Note: Pin Assignment: K: Cathode A: Anode

<p>UESD5V0V2UG-AE3-R</p>	<p>(1) R: Tape Reel</p> <p>(2) AE3: SOT-23</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
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#### MARKING



■ ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT	
ESD Discharge	IEC61000-4-2	Air Discharge	±30	kV	
		Contact Discharge	±30	kV	
Peak Pulse Current	IEC61000-4-5	t <sub>p</sub> =8/20μs	I <sub>PP</sub>	4.5	A
Peak Pulse Power			P <sub>PK</sub>	60	W
Operating Junction Temperature		T <sub>J</sub>	-55 ~ +150	°C	
Storage Temperature		T <sub>STG</sub>	-55 ~ +150	°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<sub>A</sub>=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Stand-Off Voltage	V <sub>RWM</sub>				5.0	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>R</sub> =1mA	6.0	7.5	9.0	V
Forward Voltage Drop	V <sub>F</sub>	I <sub>F</sub> =10mA			1.4	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5.0V			100	nA
Diode Capacitance	C <sub>D</sub>	V <sub>R</sub> =0V, f=1MHz		0.8		pF
Clamping Voltage (positive transient)	V <sub>CL</sub>	I <sub>PP</sub> =1.0A, t <sub>p</sub> =8/20μs (Note)			12	V
		I <sub>PPM</sub> =4.0A, t <sub>p</sub> =8/20μs (Note)			16	V

Note: Device stressed with 8/20 μs exponential decay waveform according to IEC 61000-4-5.

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