



## UESD5V0U1U

Preliminary

TVS

### ESD PROTECTION DIODE

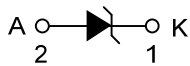
#### DESCRIPTION

The UTC **UESD5V0U1U** 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

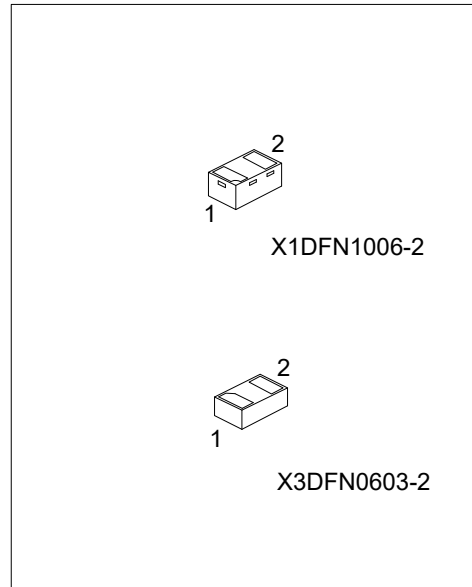
Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
UESD5V0U1UL-K02-0603X3-R	UESD5V0U1UG-K02-0603X3-R	X3DFN0603-2	K	A	Tape Reel
UESD5V0U1UL-K02-1006X1-R	UESD5V0U1UG-K02-1006X1-R	X1DFN1006-2	K	A	Tape Reel

Note: Pin Assignment: K: Cathode A: Anode

<p>UESD5V0U1UG-K02-0603X3-R</p> <p>(1)Packing Type (2)Package Type (3)Green Package</p>	<p>(1) R: Tape Reel (2) K02-0603X3: X3DFN0603-2 K02-1006X1: X1DFN1006-2 (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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#### MARKING

X3DFN0603-2	X1DFN1006-2



■ 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	1.0	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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