

**UESD18VN1U01**

Preliminary

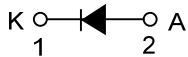
TVS

ESD PROTECTION DIODE**DESCRIPTION**

The UTC **UESD18VN1U01** 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

- * Response Time is Typically < 1 ns
- * Surge robustness: $I_{PPM}=4.2A$ for 8/20 μs pulse
- * Low Leakage

SYMBOL

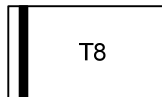
X1DFN1006-2

ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
UESD18VN1U01L-KAA-R	UESD18VN1U01G-KAA-R	X1DFN1006-2	K	A	Tape Reel

Note: Pin Assignment: K: Cathode

UESD18VN1U01G-KAA-R	
	(1) R: Tape Reel (2) KAA: X1DFN1006-2 (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	V _{ESD}	±30	kV
		Contact Discharge		±30	kV
Peak Pulse Current	IEC61000-4-5	t _p =8/20μs	I _{PP}	4.2	A
Peak Pulse Power			P _{PK}	126	W
Operating Junction Temperature			T _J	-55 ~ +150	°C
Operating Temperature			T _{OPR}	-55 ~ +125	°C
Storage Temperature			T _{STG}	-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** ($T_A = 25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Stand-Off Voltage	V_{RWM}				18	V
Reverse Breakdown Voltage	V_{BR}	$I_R = 1\text{mA}$	19		23	V
Reverse Current	I_R	$V_R = 18\text{V}$			300	nA
Forward Voltage	V_F	$I_F = 10\text{mA}$			1.2	V
Diode capacitance	C_d	$V_R = 0\text{V}$, $f = 1\text{MHz}$		45		pF
Clamping Voltage (positive transient)	V_{CL}	$I_{PPM} = 3.0\text{A}$, $t_p = 8/20\mu\text{s}$ (Note)			27	V
		$I_{PPM} = 4.2\text{A}$, $t_p = 8/20\mu\text{s}$ (Note)			30	V

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

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