



## UESD1V8L1B01

Preliminary

TVS

### ESD PROTECTION DEVICE

#### DESCRIPTION

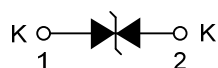
The UTC **UESD1V8L1B01** is ElectroStatic Discharge (ESD) protection diode in leadless ultra small Surface-Mounted Device (SMD) plastic package designed to protect one signal line from the damage caused by ESD and other transients.

#### FEATURES

\* Reverse stand-off voltage:  $V_{RWM}=1.8V$

\* Surge robustness:  $I_{PPM}=12A$  for 8/20 $\mu s$  pulse

#### SYMBOL



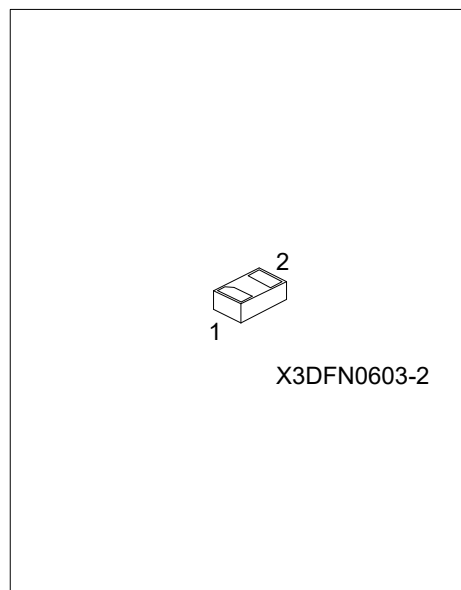
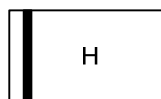
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
UESD1V8L1B01L-KAQ-R	UESD1V8L1B01G-KAQ-R	X3DFN0603-2	K	K	Tape Reel

Note: Pin Assignment: K: Cathode

UESD1V8L1B01G-KAQ-R	
(1) Packing Type	(1) R: Tape Reel
(2) Package Type	(2) KAQ: X3DFN0603-2
(3) Green Package	(3) G: Halogen Free and Lead Free, L: Lead Free

#### MARKING



X3DFN0603-2

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

PARAMETER			SYMBOL	RATINGS	UNIT
ESD Discharge	IEC61000-4-2	Air Discharge	V <sub>ESD</sub>	±30	kV
		Contact Discharge		±30	kV
Peak Pulse Current	IEC61000-4-5	t <sub>p</sub> =8/20μs	I <sub>PP</sub>	12	A
Peak Pulse Power			P <sub>PK</sub>	90	W
Operating Junction Temperature			T <sub>J</sub>	-55 ~ +150	°C
Operating Temperature			T <sub>OPR</sub>	-55 ~ +125	°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 ( $T_A = 25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Stand-Off Voltage	$V_{RWM}$				1.8	V
Reverse Breakdown Voltage	$V_{BR}$	$I_R = 1\text{mA}$		2.9		V
Reverse Current	$I_R$	$V_R = 1.8\text{V}$			0.2	$\mu\text{A}$
Diode capacitance	$C_d$	$V_R = 0\text{V}$ , $f = 1\text{MHz}$			30	pF
Clamping Voltage (positive transient)	$V_{CL}$	$I_{PPM} = 1.0\text{A}$ , $t_p = 8/20\mu\text{s}$ (Note)			3.5	V
		$I_{PPM} = 12.0\text{A}$ , $t_p = 8/20\mu\text{s}$ (Note)			7.5	V

Note: Device stressed with 8/20  $\mu\text{s}$  exponential decay waveform according to IEC 61000-4-5.

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