



UESD15VL1BA01

TVS

UNIDIRECTIONAL ESD PROTECTION DIODE

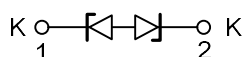
■ DESCRIPTION

The UTC **UESD15VL1BA01** unidirectional ElectroStatic Discharge (ESD) protection diode in a X1DFN1006-2 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

- * ESD protection of one line
- * Max. peak pulse power: $P_{PPM} = 200W$
- * Low clamping voltage: $V_{CL} = 40V$
- * Ultra low leakage current
- * ESD protection up to 30 kV
- * IEC 61000-4-2; level 4 (ESD)
- * IEC 61000-4-5; (surge); $I_{PPM} = 5A$

■ SYMBOL



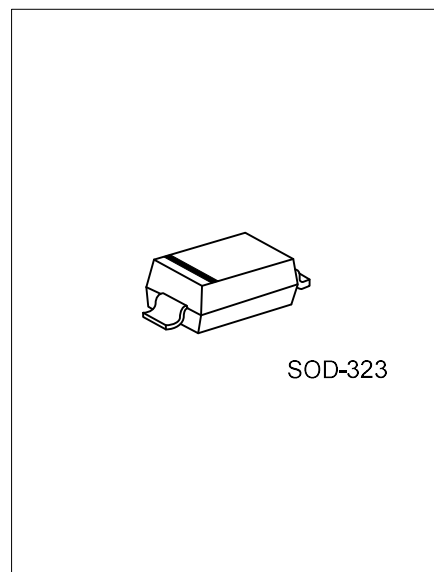
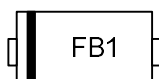
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
UESD15VL1BA01L-CB2-R	UESD15VL1BA01G-CB2-R	SOD-323	K	K	Tape Reel

Note: Pin Assignment: K: Cathode

UESD15VL1BA01G-CB2-R	(1) Packing Type (2) Package Type (3) Green Package	(1) R: Tape Reel (2) CB2: SOT-323 (3) G: Halogen Free and Lead Free, L: Lead Free
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■ MARKING



SOD-323

■ **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}	±15	kV
		Contact Discharge		±30	kV
Peak Pulse Current	IEC61000-4-5	t _p =8/20μs	I _{PPM}	5	A
Peak Pulse Power			P _{PPM}	200	W
Operating Junction Temperature			T _J	+150	°C
Operating Temperature			T _{OPR}	-55 ~ +150	°C
Storage Temperature			T _{STG}	-65 ~ +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.

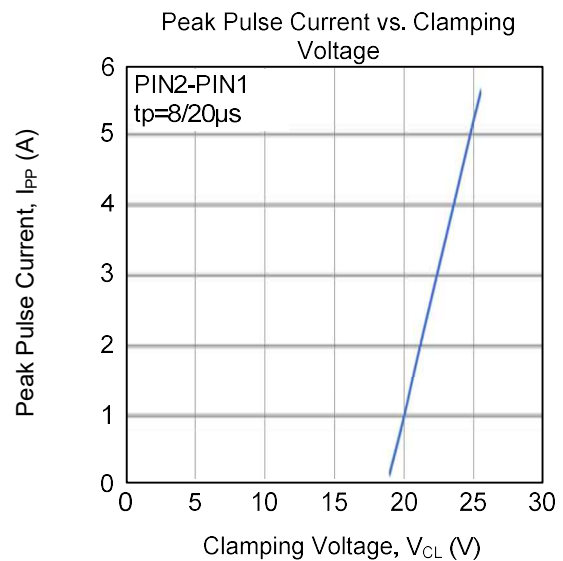
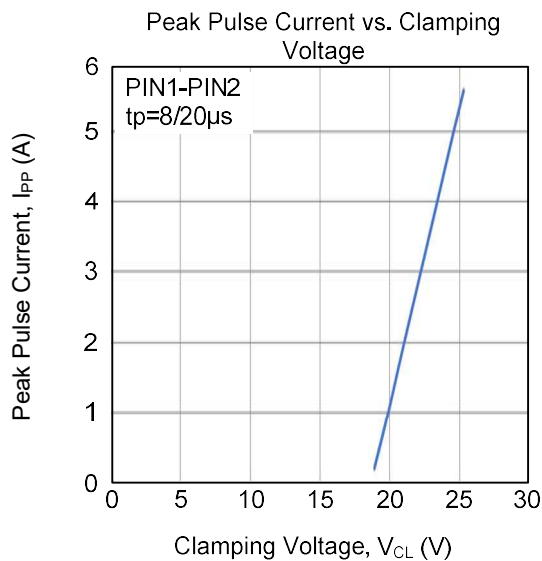
■ **ELECTRICAL CHARACTERISTICS** ($T_A = 25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Stand-Off Voltage	V_{RWM}				15	V
Reverse Breakdown Voltage (Note 1)	V_{BR}	$I_R = 5\text{mA}$	17.1	18.6	20.3	V
Reverse Current	I_R	$V_R = 15\text{V}$			100	nA
Diode capacitance	C_d	$V_R = 0\text{V}$, $f = 1\text{MHz}$		18		pF
Clamping Voltage (positive transient) (Note 2)	V_{CL}	$I_{PP} = 1\text{A}$, $t_p = 8/20\mu\text{s}$ (Note)			25	V
		$I_{PPM} = 5\text{A}$, $t_p = 8/20\mu\text{s}$ (Note)			40	V

Notes: 1. Pulse test: $t_p \leq 300\mu\text{s}$; duty cycle ≤ 0.02 .

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

■ TYPICAL CHARACTERISTICS



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