



UESD5V0L1B01

Preliminary

TVS

ESD PROTECTION DEVICE

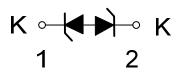
DESCRIPTION

The UTC **UESD5V0L1B01** is bidirectional 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

- * Bidirectional protection of one line
- * Reverse stand-off voltage: $V_{RWM}=5V$
- * Surge robustness: $I_{PPM}=5.0A$ for $8/20\mu s$ pulse
- * Ultra low clamping voltage: $V_{CL}<12V$ max. at $I_{PPM}=5.0A$

SYMBOL



ORDERING INFORMATION

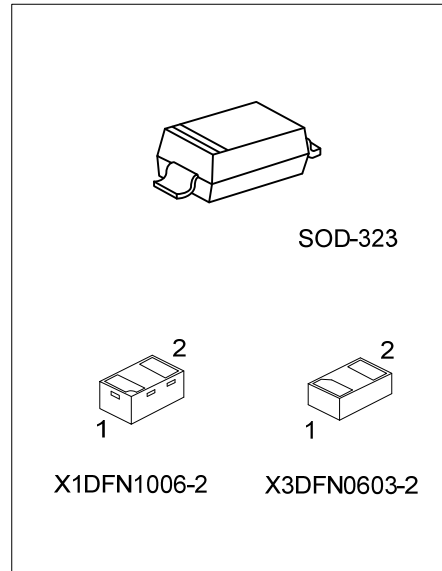
Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
UESD5V0L1B01L-CB2-R	UESD5V0L1B01G-CB2-R	SOD-323	K	K	Tape Reel
UESD5V0L1B01L-KAA-R	UESD5V0L1B01G-KAA-R	X1DFN1006-2	K	K	Tape Reel
UESD5V0L1B01L-KAQ-R	UESD5V0L1B01G-KAQ-R	X3DFN0603-2	K	K	Tape Reel

Note: Pin Assignment: K: Cathode

UESD5V0L1B01G-CB2-R	(1) Packing Type (2) Package Type (3) Green Package	(1) R: Tape Reel (2) CB2: SOT-323, KAA: X1DFN1006-2 KAQ: X3DFN0603-2 (3) G: Halogen Free and Lead Free, L: Lead Free
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MARKING

SOD-323	X1DFN1006-2	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_{ESD}	± 25	kV
		Contact Discharge		± 25	kV
Peak Pulse Current	IEC61000-4-5	$t_p=8/20\mu\text{s}$	I_{PP}	7.5	A
Peak Pulse Power			P_{PK}	50	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}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_{\text{R}}=1\text{mA}$	5.6	6.5	7.6	V
Reverse Current	I_{R}	$V_{\text{R}}=5.0\text{V}$			1.0	μA
Diode capacitance	C_{D}	$V_{\text{R}}=0\text{V}$, $f=1\text{MHz}$		15.5	20	pF
Clamping Voltage (positive transient)	V_{CL}	$I_{\text{PP}}=1.0\text{A}$, $t_p=8/20\mu\text{s}$ (Note)			8.3	V
		$I_{\text{PPM}}=5.0\text{A}$, $t_p=8/20\mu\text{s}$ (Note)			12	V

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

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