



UESD5V0L1B02

Preliminary

TVS

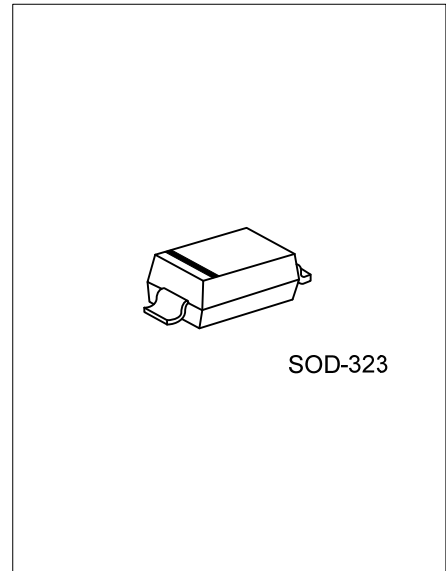
ESD PROTECTION DEVICE

DESCRIPTION

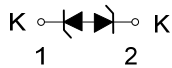
The UTC **UESD5V0L1B02** is bidirectional ElectroStatic Discharge (ESD). protection diode in leadless ultra small Surface-Mounted Device (SMD) plastic package designed to protect one signal line from the damage caused by ESD and other transients.

FEATURES

- * Bidirectional protection of one line
- * Reverse stand-off voltage: $V_{RWM}=5V$
- * Surge robustness: $I_{PPM}=22A$ for 8/20 μs pulse
- * Ultra low clamping voltage: $V_{CL} < 10.5V$ max. at $I_{PPM}=22A$



SYMBOL



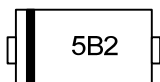
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
UESD5V0L1B02L-CB2-R	UESD5V0L1B02G-CB2-R	SOD-323	K	K	Tape Reel

Note: Pin Assignment: K: Cathode

<p>UESD5V0L1B02G-CB2-R</p>	<p>(1) R: Tape Reel</p> <p>(2) CB2: SOT-323</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
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MARKING



■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$, 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	$t_p=8/20\mu\text{s}$	I_{PP}	17.5	A
Peak Pulse Power			P_{PK}	155	W
Operating Junction Temperature		T_J	-55 ~ +150	$^\circ\text{C}$	
Operating Temperature		T_{OPR}	-55 ~ +125	$^\circ\text{C}$	
Storage Temperature		T_{STG}	-55 ~ +150	$^\circ\text{C}$	

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}	$I_R=1\text{mA}$	5.6	6.6	7.6	V
Reverse Current	I_R	$V_R=5.0\text{V}$			1.0	μA
Diode capacitance	C_d	$V_R=0\text{V}$, $f=1\text{MHz}$		45	60	pF
Clamping Voltage (positive transient)	V_{CL}	$I_{PP}=1.0\text{A}$, $t_p=8/20\mu\text{s}$ (Note)			8	V
		$I_{PPM}=20\text{A}$, $t_p=8/20\mu\text{s}$ (Note)			12	V

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

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