



UESD5V0V1B

Preliminary

TVS

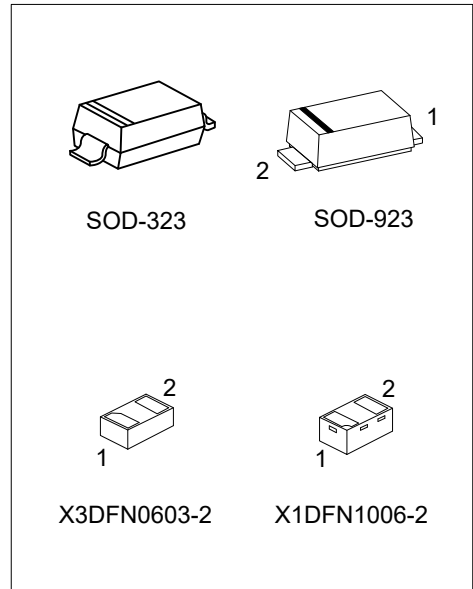
ESD PROTECTION DIODE

DESCRIPTION

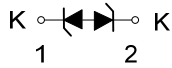
The UTC **UESD5V0V1B** is bidirectional ElectroStatic Discharge (ESD). protection diode in leadless ultra small Surface-Mounted Device (SMD) plastic package designed to protect one signal line from the damage caused by ESD and other transients.

FEATURES

- * Bidirectional protection of one line
- * Reverse stand-off voltage: $V_{RWM}=5V$
- * Surge robustness: $I_{PPM}=5.0A$ for 8/20 μs pulse
- * Ultra low clamping voltage: $V_{CL}=13V$ max. at $I_{PPM}=5.0A$



SYMBOL



ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
UESD5V0V1BL-CB2-R	UESD5V0V1BG-CB2-R	SOD-323	K	K	Tape Reel
UESD5V0V1BL-CF2-R	UESD5V0V1BG-CF2-R	SOD-923	K	K	Tape Reel
UESD5V0V1BL-KAA-R	UESD5V0V1BG-KAA-R	X1DFN1006-2	K	K	Tape Reel
UESD5V0V1BL-KAQ-R	UESD5V0V1BG-KAQ-R	X3DFN0603-2	K	K	Tape Reel

Note: Pin Assignment: K: Cathode

<p>UESD5V0V1BG-CB2-R</p>	<p>(1) R: Tape Reel (2) CB2: SOT-323, CF2: SOD-923 KAA: X1DFN1006-2, KAQ: X3DFN0603-2 (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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MARKING

SOD-323	SOD-923
X3DFN0603-2	X1DFN1006-2

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°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 =8/20μs	I _{PP}	5	A
Peak Pulse Power			P _{PK}	30	W
Operating Junction Temperature		T _J	-55 ~ +150	°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°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 =1mA	5.5		7.5	V
Reverse Current	I _R	V _R =5.0V			100	nA
Diode capacitance	C _D	V _R =0V, f=1MHz		10		pF
Clamping Voltage (positive transient)	V _{CL}	I _{PP} =1.0A, t _p =8/20μs (Note)			9	V
		I _{PPM} =5.0A, t _p =8/20μs (Note)			13	V

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

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