

**UESD5V0V1B01**

Preliminary

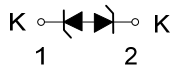
TVS

ESD PROTECTION DIODE**DESCRIPTION**

The UTC **UESD5V0V1B01** 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: $V_{CL}=9.0V$ max. at $I_{PPM}=5.0A$

SYMBOL**ORDERING INFORMATION**

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
UESD5V0V1B01L-CB2-R	UESD5V0V1B01G-CB2-R	SOD-323	K	K	Tape Reel
UESD5V0V1B01L-CF2-R	UESD5V0V1B01G-CF2-R	SOD-923	K	K	Tape Reel
UESD5V0V1B01L-KAA-R	UESD5V0V1B01G-KAA-R	X1DFN1006-2	K	K	Tape Reel
UESD5V0V1B01L-KAQ-R	UESD5V0V1B01G-KAQ-R	X3DFN0603-2	K	K	Tape Reel

Note: Pin Assignment: K: Cathode

UESD5V0V1B01G-CB2-R (1) Packing Type (2) Package Type (3) Green Package	(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
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MARKING

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

■ **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}	±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}	45	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** ($T_A=25^{\circ}\text{C}$, 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}	$I_{\text{R}}=1\text{mA}$	5.5		7.5	V
Reverse Current	I_{R}	$V_{\text{R}}=5.0\text{V}$			100	nA
Diode capacitance	C_{D}	$V_{\text{R}}=0\text{V}$, $f=1\text{MHz}$		10		pF
Clamping Voltage (positive transient)	V_{CL}	$I_{\text{PP}}=1.0\text{A}$, $t_p=8/20\mu\text{s}$ (Note)			8.0	V
		$I_{\text{PPM}}=5.0\text{A}$, $t_p=8/20\mu\text{s}$ (Note)			9.0	V

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

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