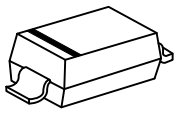
UESD5V0L1B02

Preliminary ***TVS***

ESD PROTECTION DEVICE



SOD-323

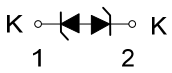
■ DESCRIPTION

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 8/20μs 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

UESD5V0L1B02G-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

■ MARKING

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°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}	17.5	A
Peak Pulse Power			P_{PK}	155	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°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	5.6	6.6	7.6	V
Reverse Current	I_R	V_R=5.0V			1.0	μA
Diode capacitance	C_d	V_R=0V, f=1MHz		45	60	pF
Clamping Voltage (positive transient)	V_{CL}	I_{PP}=1.0A, t_P=8/20μs (Note)			8	V
		I_{PPM}=20A, t_P=8/20μs (Note)			12	V

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