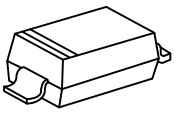
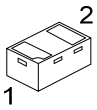
UESD5V0L1B01

Preliminary ***TVS***

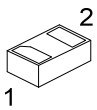
ESD PROTECTION DEVICE



SOD-323



X1DFN1006-2



X3DFN0603-2

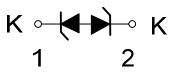
■ DESCRIPTION

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 8/20μs 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

■ MARKING

SOD-323	X1DFN1006-2	X3DFN0603-2
5V0L	501	A

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°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=8/20μs	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°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	6.5	7.6	V
Reverse Current	I_R	V_R=5.0V			1.0	uA
Diode capacitance	C_D	V_R=0V, f=1MHz		15.5	20	pF
Clamping Voltage (positive transient)	V_{CL}	I_{PP}=1.0A, t_P=8/20μs (Note)			8.3	V
		I_{PPM}=5.0A, t_P=8/20μs (Note)			12	V

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