

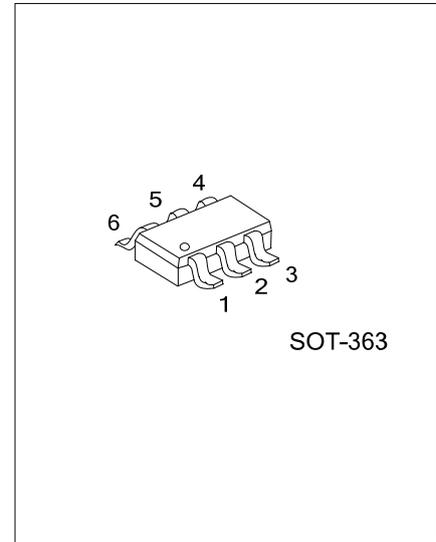


## UESD5V0L5U

Preliminary

TVS

### UNI-DIRECTIONAL ESD / TRANSIENT PROTECTION DIODE



#### DESCRIPTION

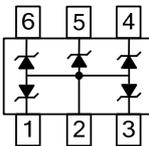
The UTC **UESD5V0L5U** is uni-directional ESD transient bidirectional protection diode, it uses UTC's advanced technology to provide customers with low leakage current and high integration, etc.

The UTC **UESD5V0L5U** is suitable for ESD protection and high density boards.

#### FEATURES

- \* Uni-directional, working voltage:  $V_{RWM}=5V$
- \* Ultra low clamping voltage, protects against both positive and negative ESD strikes
- \* Ultra low dynamic resistance:  $R_{DYN}$  down to  $0.3\Omega$
- \* Very fast response time

#### SYMBOL



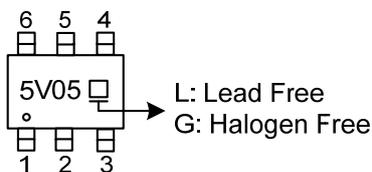
#### ORDERING INFORMATION

Ordering Number		Package	Packing
Lead Free	Halogen Free		
UESD5V0L5UL-AL6-R	UESD5V0L5UG-AL6-R	SOT-363	Tape Reel

Note: Pin Assignment: E: Emitter B: Base C: Collector

<p>UESD5V0L5UG-AL6-R</p> <ul style="list-style-type: none"> <li>(1) Packing Type</li> <li>(2) Package Type</li> <li>(3) Green Package</li> </ul>	<ul style="list-style-type: none"> <li>(1) R: Tape Reel</li> <li>(2) AL6: SOT-363</li> <li>(3) G: Halogen Free and Lead Free, L: Lead Free</li> </ul>
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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	$\pm 25$	kV	
		Contact Discharge	$\pm 20$	kV	
Peak Pulse Current	IEC61000-4-5	$t_p=8/20\mu\text{s}$	$I_{PP}$	$\pm 10.0$	A
Peak Pulse Power			$P_{PK}$	66	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	V
Reverse Breakdown Voltage	$V_{BR}$	$I_R=1\text{mA}$	5.7	6.5	7.5	V
Forward Voltage Drop	$V_F$	$I_F=1\text{mA}$			0.9	V
Reverse Current	$I_R$	$V_R=5.0\text{V}$			1.0	$\mu\text{A}$
Diode capacitance	$C_d$	$V_R=0\text{V}$ , $f=1\text{MHz}$		66	76	pF
		$V_R=2.5\text{V}$ , $f=1\text{MHz}$		38		pF
Dynamic impedance	$R_d$	$I_{PPM}=5\text{A}$ , $t_p=8/20\mu\text{s}$		0.3		$\Omega$
Clamping Voltage	$V_{CL}$	$I_{PP}=5\text{A}$ , $t_p=8/20\mu\text{s}$		8.2		V
		$I_{PP}=8\text{A}$ , $t_p=8/20\mu\text{s}$		9.0		V

Note: Device stressed with 8/20 $\mu\text{s}$  exponential decay waveform according to IEC 61000-4-5.

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