



## UESD5V0U5U

Preliminary

TVS

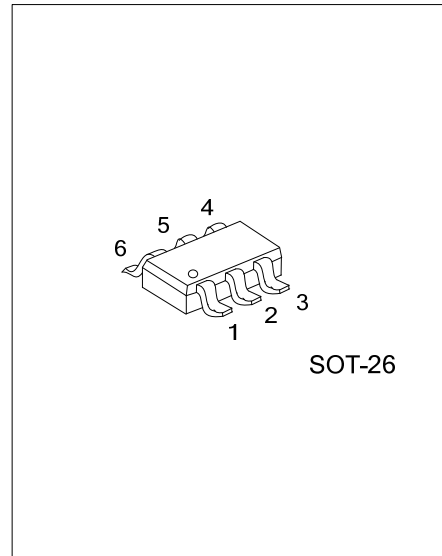
### ESD PROTECTION DEVICE

#### DESCRIPTION

The UTC **UESD5V0U5U** at higher operating frequencies or faster edge rates, insertion loss and signal integrity are a major concern. This device in conjunction with passive components integrated into a TVS/filter network can be used for EMI/RFI protection.

#### FEATURES

- \* Unidirectional device
- \* Low leakage current (IR max. < 0.5μA at V<sub>BR</sub>)
- \* 60W peak pulse power (8/20μs)

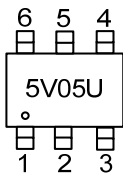


#### ORDERING INFORMATION

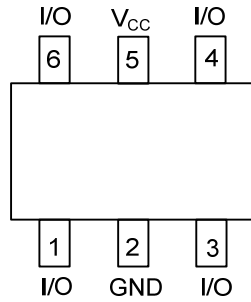
Ordering Number		Package	Packing
Lead Free	Halogen Free		
UESD5V0U5UL-AG6-R	UESD5V0U5UG-AG6-R	SOT-26	Tape Reel

<p>UESD5V0U5UG-AG6-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) AG6: SOT-26</li> <li>(3) G: Halogen Free and Lead Free, L: Lead Free</li> </ul>
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#### MARKING



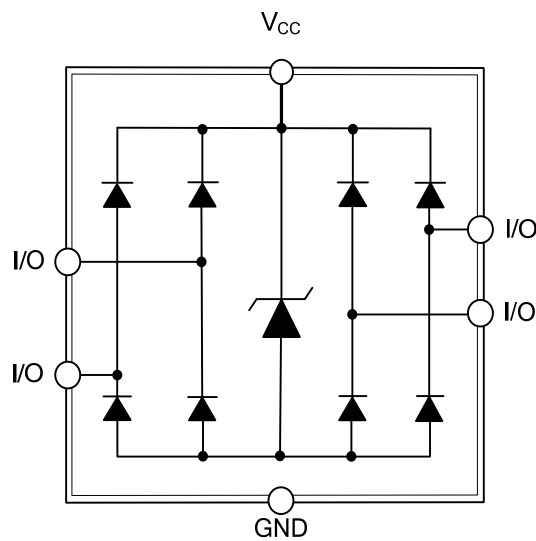
■ PIN CONFIGURATION



■ PIN DESCRIPTION

PIN NO.	PIN NAME	DESCRIPTION
1	I/O	Terminal of ESD 1
2	GND	Ground
3	I/O	Terminal of ESD 2
4	I/O	Terminal of ESD 3
5	V <sub>CC</sub>	Supply Voltage
6	I/O	Terminal of ESD 4

■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^{\circ}\text{C}$ , unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT	
ESD Discharge	IEC61000-4-2	Air Discharge	$\pm 30$	kV	
		Contact Discharge	$\pm 30$	kV	
Peak Pulse Current	IEC61000-4-5	$t_p=8/20\mu\text{s}$	$I_{PP}$	4	A
Peak Pulse Power			$P_{PP}$	60	W
Operating Junction Temperature		$T_J$	-40 ~ +150	$^{\circ}\text{C}$	
Operating Temperature		$T_{OPR}$	-40 ~ +125	$^{\circ}\text{C}$	
Storage Temperature		$T_{STG}$	-65 ~ +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	$V_{RWM}$		5.0			V
Reverse Breakdown Voltage	$V_{BR}$	$I_R=1\text{mA}$	6.0			V
Forward Voltage Drop	$V_F$	$I_F=200\text{mA}$			1.5	V
Reverse Current	$I_R$	$V_R=5\text{V}$			0.5	$\mu\text{A}$
Diode capacitance	$C_d$	$V_R=0\text{V}$ , $f=1\text{MHz}$		0.8	1.0	pF
Clamping Voltage (positive transient)	$V_{CL}$	$I_{PPM}=4\text{A}$ , $t_p=8/20\mu\text{s}$		9.5		V
Dynamic impedance	$R_d$	$I_{PPM}=4\text{A}$ , $t_p=8/20\mu\text{s}$		0.3		$\Omega$

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

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