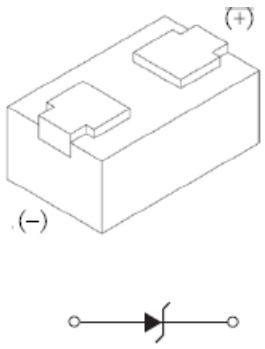
DFNWB1.0×0.6-02L Plastic-Encapsulate Diodes

ESDU5V0A1 ESD PROTECTION DIODE

DFNWB1.0×0.6-02L



DESCRIPTION

The ESDU5V0A1 is designed to protect voltage sensitive components from ESD. Excellent clamping capability, low leakage,and fast response time provide best in class protection on designs that are exposed to ESD.

FEATURES

- Low Reverse Stand−off Voltage: 5.0 V
- Low Leakage Current
- Response Time is Typically < 1 ns
- ESD Rating of Class 3 per human body model
- IEC 61000-4-2 Level 4 ESD protection
- These are Pb−Free Devices

APPLICATION

- Computers and peripherals
- Communications systems
- Audio and video equipment
- High speed data lines
- Parallel ports

MARKING：AE

TOPVIEW

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Parameter		Symbol	Limit	Unit
IEC 61000-4-2 ESD Voltage (Note 1)	Air Model	V_{ESD}	±15	kV
	Contact Model		±15	
JESD22-A114-B ESD Voltage (Note 1)	Per Human Body Mode		12	
ESD Voltage (Note 1)	Machine Model		0.4	
Peak Pulse Current (8/20μs Waveform) (Note 2)		I_{PP}	7	A
Peak Pulse Power (8/20μs Waveform) (Note 2)		P_{PP}	100	W
Total Power Dissipation on FR-5 Board (Note 3)		P_D	100	mW
Thermal Resistance from Junction to Ambient		$R_{\Theta JA}$	1250	℃/W
Lead Solder Temperature − Maximum (10 Second Duration)		T_L	260	℃
Junction Temperature		T_J	150	℃
Storage Temperature Range		T_{stg}	-55 ~ +150	℃

Note: 1.Device stressed with ten non-repetitive ESD pulses.

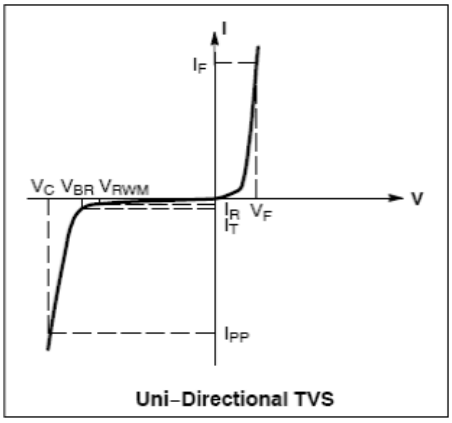
2.Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5.

3. FR−5 = 1.0 x 0.75 x 0.62 in.

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only.Functional operation above the Recommended.Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

ELECTRICAL PARAMETER

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T



Uni−Directional TVS

ELECTRICAL CHARACTERISTICS (T_a = 25°C unless otherwise noted)

Device[1]	Device Marking	V_{RWM} (V)	I_R (μA) @ V_{RWM}	V_{BR} (V) [2] @ I_T=1mA		V_C(V) @I_{PP}[3]=1 A	V_C(V) @I_{PP}[3]=3 A	C (pF) @V_R=0,f=1MHz	
		Max	Max	Min	Max	Max	Max	Typ	Max
ESDU5V0A1	**AE**	5	1	5.4	9.4	10	15	0.5	0.9

(1)Other voltages available upon request.

(2)V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C.

(3) Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC 61000-4-5.