

ESD0301BU

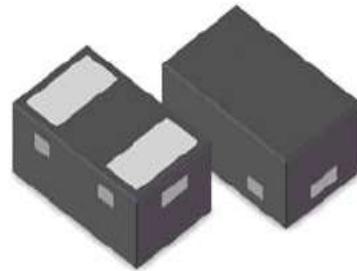
ESD0301BU Ultra Low Capacitance ESD Protection Diode

General description

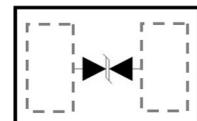
Silicon Protection Diode in a DFN1006 Package.

FEATURES

- 100 Watt peak pulse power ($t/p=8/20$)
- Capacitance typ. 0.25 pF
- Bidirectional configurations
- Low Leakage Current
- Low clamping voltage
- IEC 61000-4-2 $\pm 20\text{Kv}$ Contact $\pm 20\text{Kv}$ air.
- RoHS Compliant
- Green EMC



DFN1006 Package

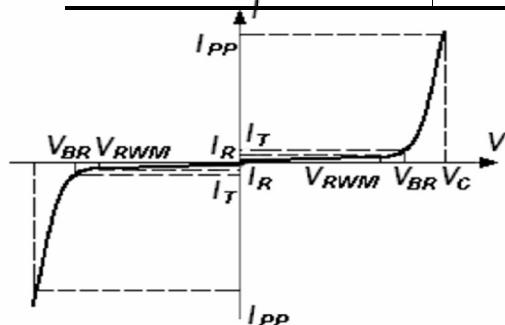


Device Marking:

Device Type	Marking	Shipping
ESD0301BU	3BU	10,000/Reel

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



Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Test Condition	Min	Typ	Max	Unit
V_{BR}	Reverse Breakdown Voltage	$I_T=1\text{mA}$	4.2		--	Volts
V_{RWM}	Reverse Stand-off Voltage		--	--	3.3	Volts
I_R	Reverse Leakage Current	$V_R=3.3\text{V}$	--	--	100	nA
V_C	Clamping Voltage	$I_{PP}=1\text{A} (8/20\mu\text{s})$	--	--	12	Volts
		$I_{PP}=4\text{A} (8/20\mu\text{s})$	--	--	25	Volts
C_J	Junction Capacitance	$V_R=0\text{V}, f=1\text{MHz}$	--	0.25	0.4	pF

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ELECTRICAL CHARACTERISTICS CURVE

Fig 1 Power Derating Curve

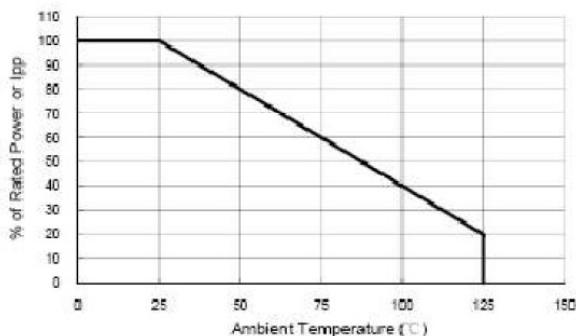


Fig 2 Clamping Voltage vs Peak Pulse Current

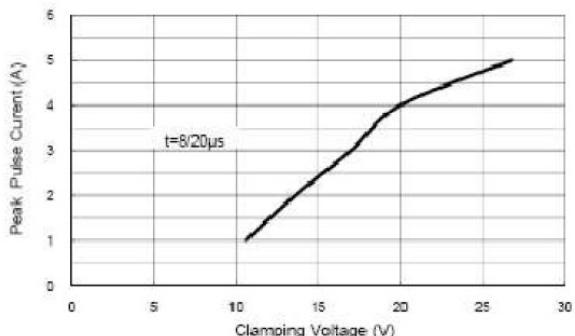


Fig 3 Voltage Sweeping

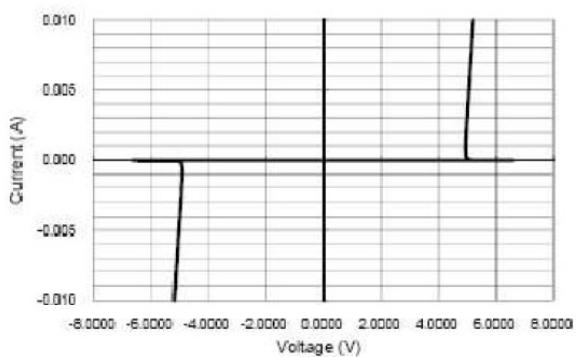


Fig 4 Voltage vs Capacitance

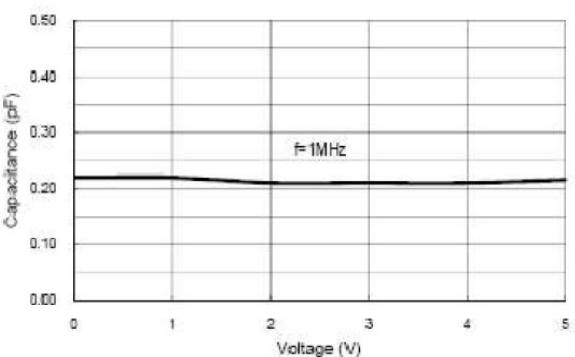


Fig 5 ESD Clamping (+8kV Contact per IEC 61000-4-2)

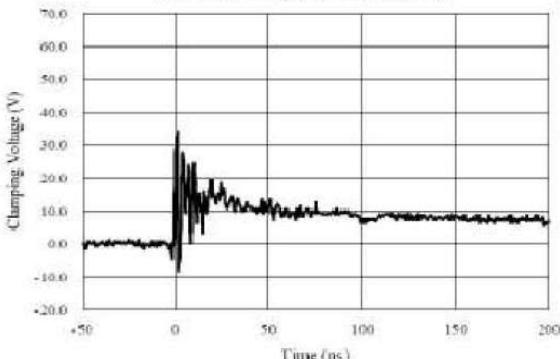
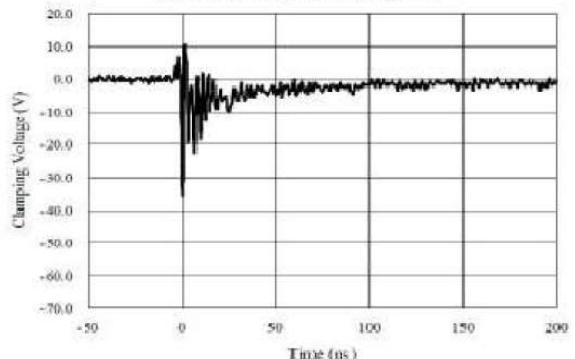
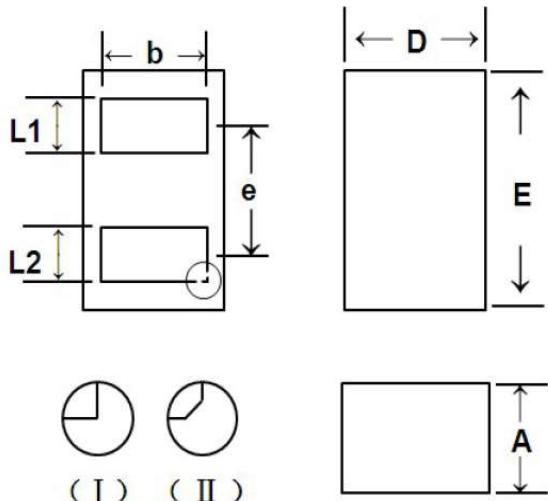


Fig 6 ESD Clamping (-8kV Contact per IEC 61000-4-2)



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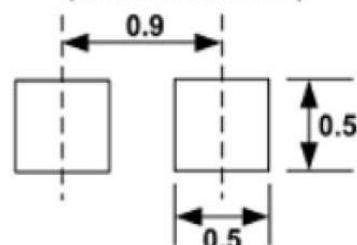
DFN1006 PACKAGE OUTLINE DIMENSIONS



NOTE: ALL DIMENSIONS IN MM

	MIN	NOM	MAX
D	0.55	0.60	0.65
E	0.95	1.00	1.05
L1	0.20	0.25	0.30
L2	0.20	0.25	0.30
A	0.45	0.50	0.55
b	0.45	0.50	0.55
e		0.64BSC	

Dimension: Millimeter
(Stencil thickness: 0.1)



Soldering Footprint

ESD0301BU

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