

ESDA6V8UIB

2-Line, Ultra-Low-Capacitor, Uni-directional Transient Voltage Suppressors

Descriptions

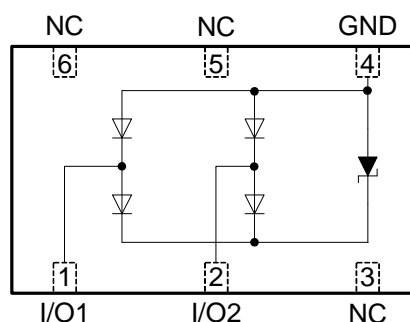
The ESDA6V8UIB is a transient voltage suppressors (TVS) which provide a very high level protection for sensitive electronic components that may be subjected to electrostatic discharge (ESD). It is designed to replace multilayer varistors (MLV) in consumer equipments applications such as mobile phone, notebook, PAD, STB, LCD TV etc.

The ESDA6V8UIB was past ESD transient voltage up to ±10kV (contact) according to IEC61000-4-2 and withstand peak current up to 3A for 8/20us pulse according to IEC61000-4-5.

The ESDA6V8UIB is available in DFN1.45*1.0 package. Standard products are Pb-free and Halogen-free.



DFN1.45*1.0



Pin configuration (Top view)



DFN1.45*1.0

** = Week (00~52)

I = Device code

Marking

Features

- Working voltage : 5V
- Peak power (tp=8/20us) : 48W
- ESD protection
 - IEC61000-4-2 (Contact) : ±10kV
 - IEC61000-4-2 (Air) : ±15kV
- Low leakage current
- Small package

Applications

- Mobile phone
- PAD
- Notebook
- STB
- LCD TV
- Digital camera
- Other electronics equipments

Order information

Device	Package	Shipping
ESDA6V8UIB-6/TR	DFN1.45*1.0	3000/Tape&Reel

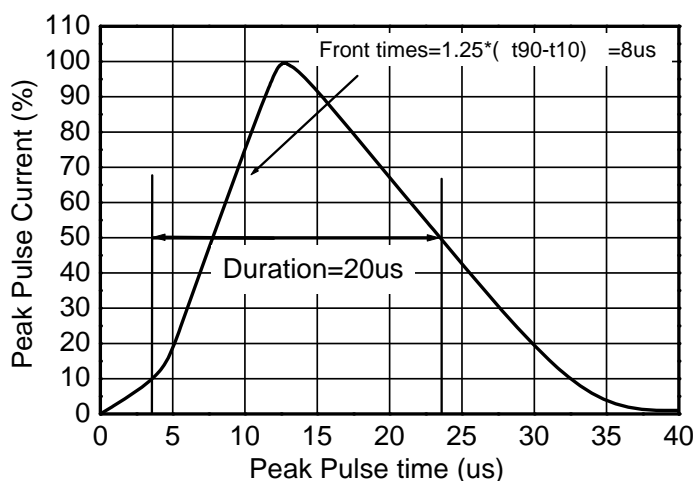
ESDA6V8UIB

Absolute maximum ratings

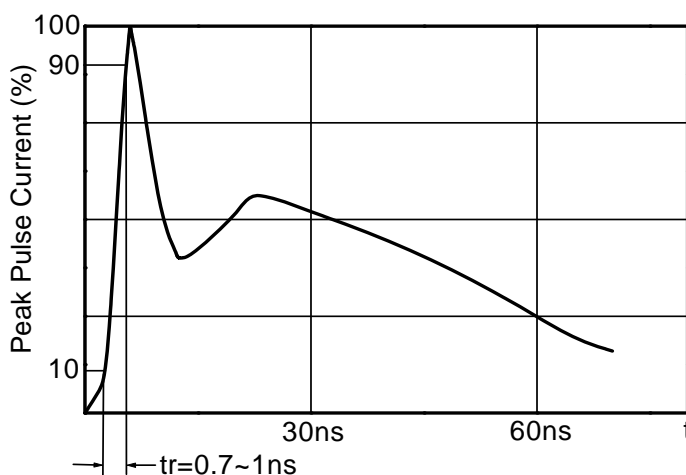
Parameter	Symbol	Rating	Unit
Peak pulse power (tp=8/20us)	Ppk	48	W
Peak pulse current (tp=8/20us)	Ipp	3	A
ESD voltage IEC61000-4-2 air	V _{ESD}	±15	kV
ESD voltage IEC61000-4-2 contact		±10	
Junction temperature	T _J	125	°C
Operating temperature	T _{OP}	-40~85	°C
Lead temperature	T _L	260	°C
Storage temperature	T _{STG}	-55~150	°C

Electronics characteristics (Ta=25 °C, unless otherwise noted)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reveres maximum working voltage	V _{RWM}				5.0	V
Reveres leakage current	I _R	V _{RWM} =5V			1.0	uA
Reveres breakdown voltage	V _{BR}	I _T =1mA	6.5	8.0	9.5	V
Forward voltage	V _F	I _F =10mA	-0.4	-0.8	-1.4	V
Clamping voltage	V _C	Ipp=1A tp=8/20us			12	V
		Ipp=3A tp=8/20us			16	V
Junction capacitance (I/O to GND)	C _J	F _{AC} =1MHz, V _R =0V		0.9	1.2	pF
Junction capacitance (I/O to I/O)	C _J	F _{AC} =1MHz, V _R =0V		0.45	0.6	pF



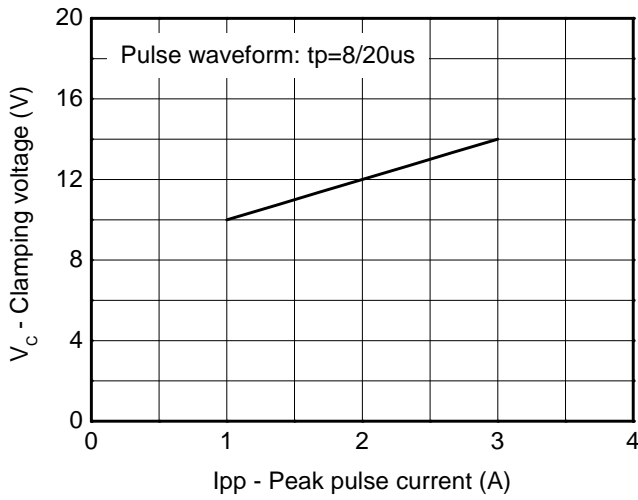
8/20us waveform



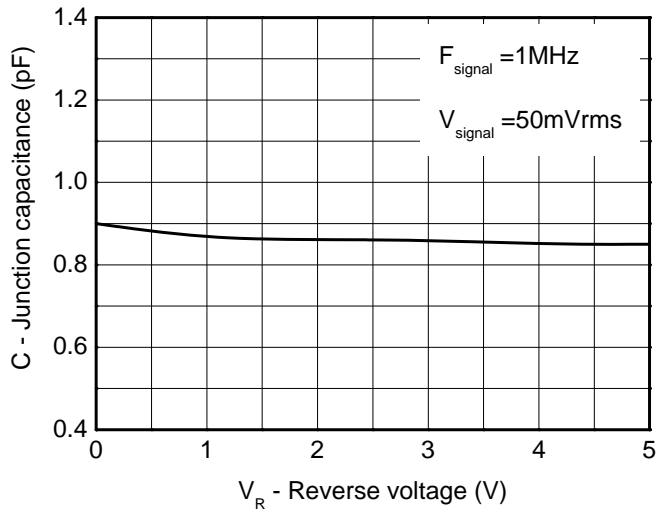
IEC61000-4-2 waveform

ESDA6V8UIB

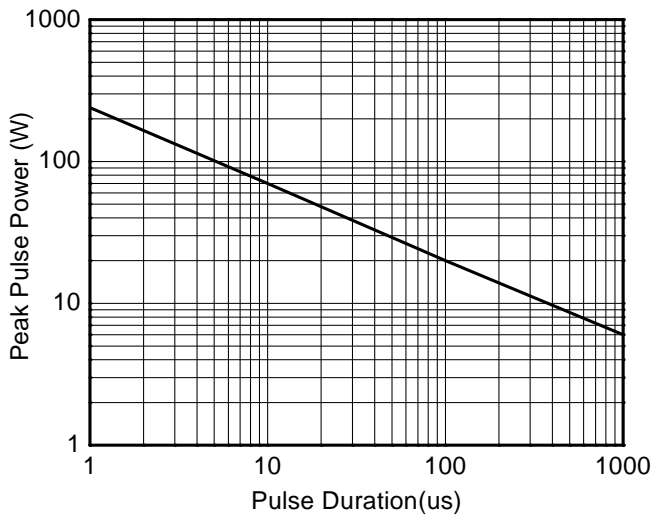
Typical characteristics (Ta=25°C, unless otherwise noted)



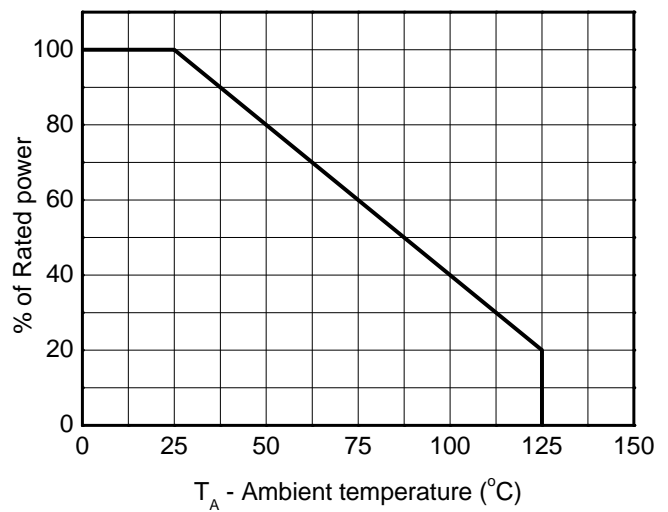
Clamping voltage vs. Peak pulse current



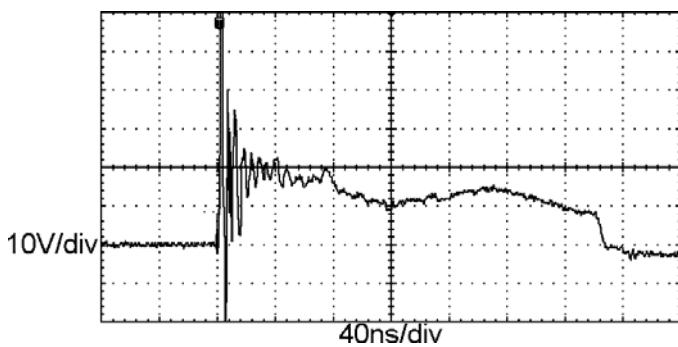
Capacitance vs. Reverse voltage



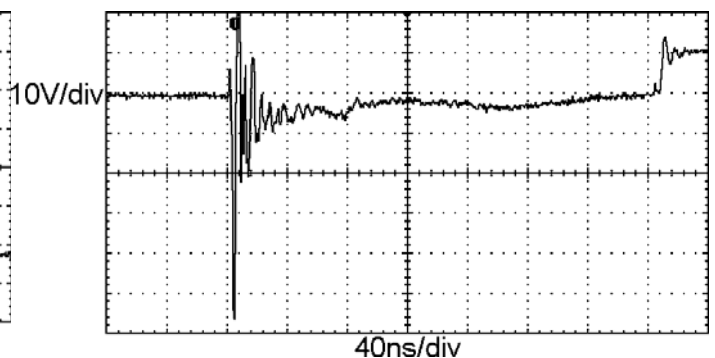
Non-Repetitive Peak Pulse Power vs. Pulse time



Power derating vs. Temperature



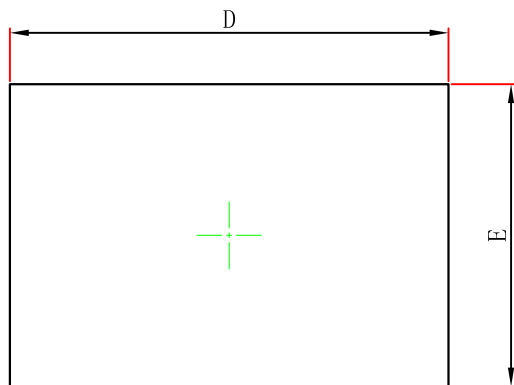
**ESD Clamping
(IEC61000-4-2 +8kV contact)**



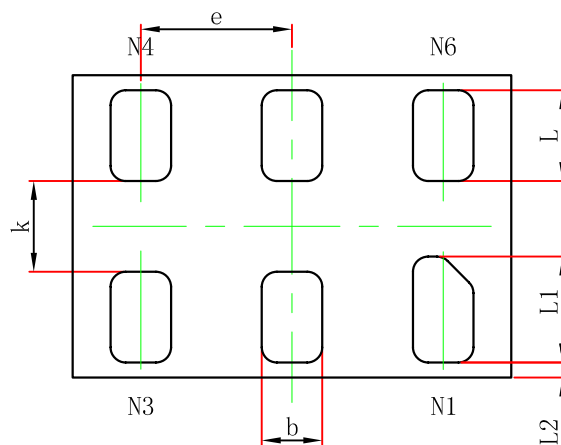
**ESD Clamping
(IEC61000-4-2 -8kV contact)**

Package outline dimensions

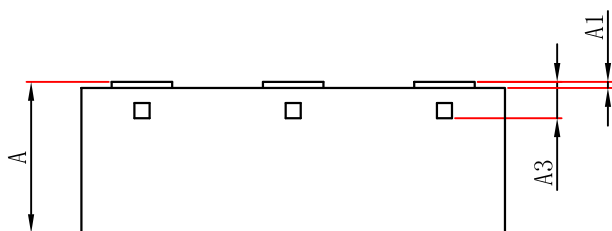
DFN1.45*1.0



TOP VIEW



BOTTOM VIEW



SIDE VIEW

Symbol	Dimensions in millimeter		
	Min.	Typ.	Max.
A	0.500	-	0.600
A1	0.010	-	0.050
A3	0.120REF		
D	1.374		1.526
E	0.924		1.076
k	0.200MIN		
b	0.150		0.250
e	0.500TYP		
L	0.250		0.350
L1	0.300		0.400
L2	0.000		0.100