

ESDA6V8UDA

4-Lines, Uni-directional, Ultra-low Capacitance, Transient Voltage Suppressors

Descriptions

The ESDA6V8UDA 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 ESDA6V8UDA was past ESD transient voltage up to ±8KV (contact) according to IEC61000-4-2 and withstand peak current up to 2.5A for 8/20us pulse according to IEC61000-4-5.

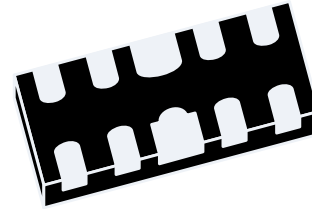
The ESDA6V8UDA is available in DFN2510-10L package. Standard products are Pb-free and Halogen-free.

Features

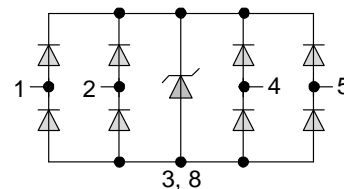
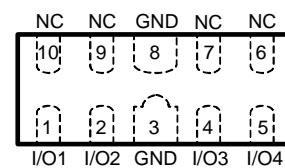
- Working voltage : 5V
- Peak power (tp=8/20us) : 30W Max.
- Peak current (tp=8/20us) : 2.5A Max.
- Transient protection
 - IEC61000-4-2 : ±15kV air
 - : ±8kV contact
- Ultra-low clamping voltage
- Low leakage current
- Small package

Applications

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



DFN2510-10L



Pin configuration (Top view)



.W = Device code
 Y = Year code
 W = Week code

Marking

Order information

Device	Package	Shipping
ESDA6V8UDA-10/TR	DFN2510-10L	3000/Tape&Reel

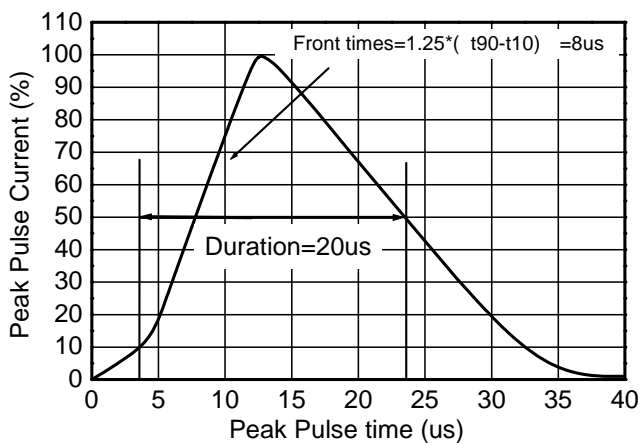
ESDA6V8UDA

Absolute maximum ratings

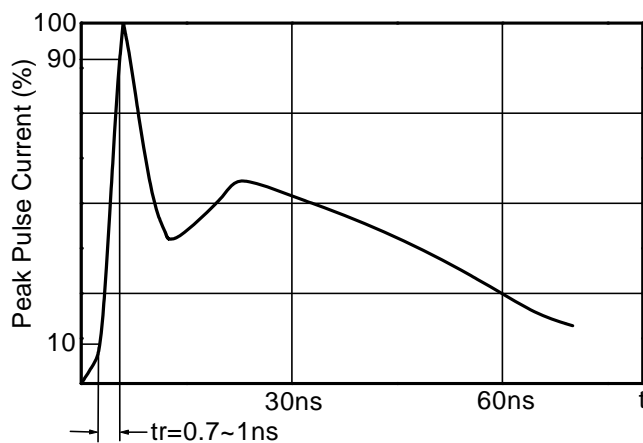
Parameter	Symbol	Rating	Unit
Peak pulse power (tp=8/20us)	Ppk	30	W
Peak pulse current (tp=8/20us)	Ipp	2.5	A
ESD voltage IEC61000-4-2 air	V _{ESD}	±15	kV
ESD voltage IEC61000-4-2 contact		±8	
Operation junction temperature	T _J	125	°C
Lead temperature	T _L	260	°C
Storage temperature	T _{stg}	-55~150	°C

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

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse maximum working voltage	V _{RWM}				5.0	V
Reverse leakage current	I _R	V _{RWM} =5V			1.0	uA
Reverse breakdown voltage	V _{BR}	I _T =1mA	6.5	8.0	10	V
Forward voltage	V _F	I _T =10mA	0.4	0.8	1.4	V
Clamping voltage	V _C	I _{pp} =1A tp=8/20us			10	V
		I _{pp} =2.5A tp=8/20us			12	V
Junction capacitance	C _J	I/O-to-GND F=1MHz, V _R =0V		0.7	0.9	pF
		I/O-to-I/O F=1MHz, V _R =0V		0.35	0.5	pF



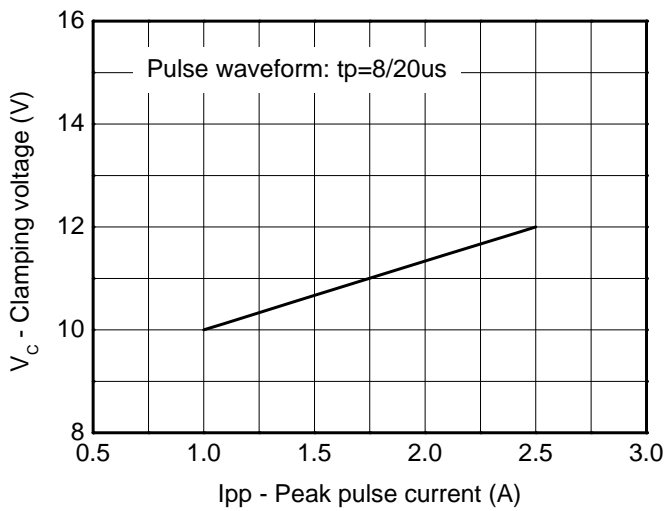
8/20us waveform



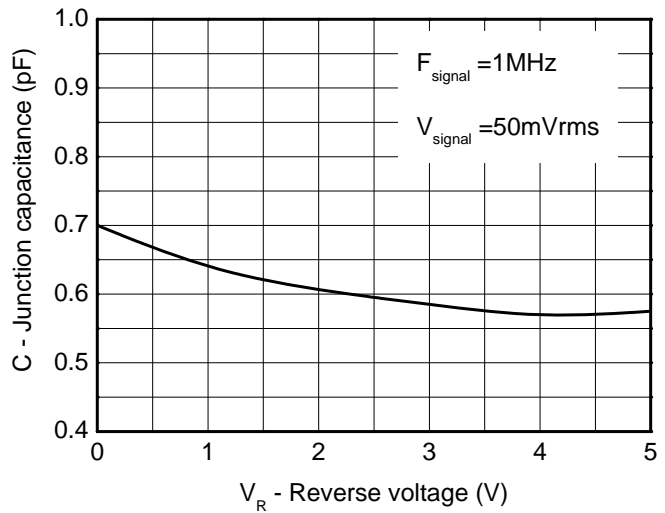
IEC61000-4-2 waveform

ESDA6V8UDA

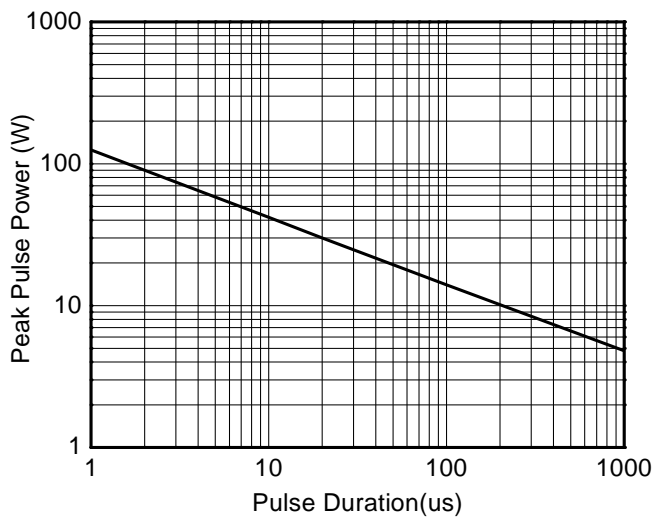
Typical characteristics (Ta=25°C, unless otherwise noted)



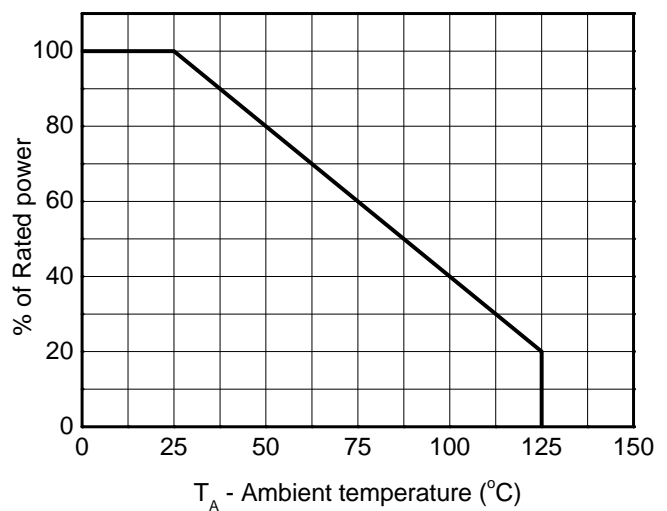
Clamping voltage vs. Peak pulse current



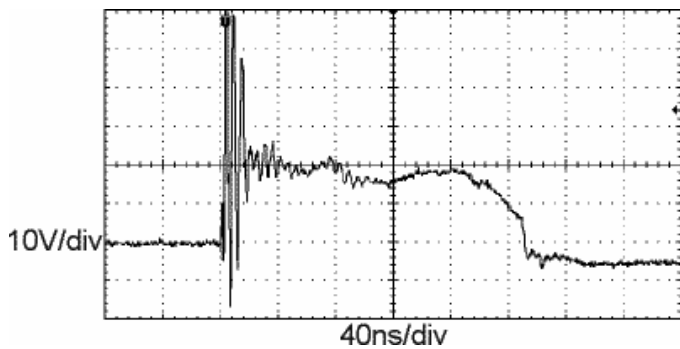
Capacitance vs. Reverse voltage



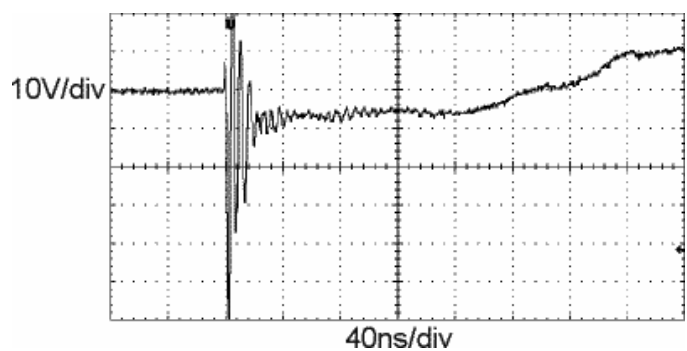
Non-Repetitive Peak Pulse Power vs. Pulse time



Power derating vs. Temperature



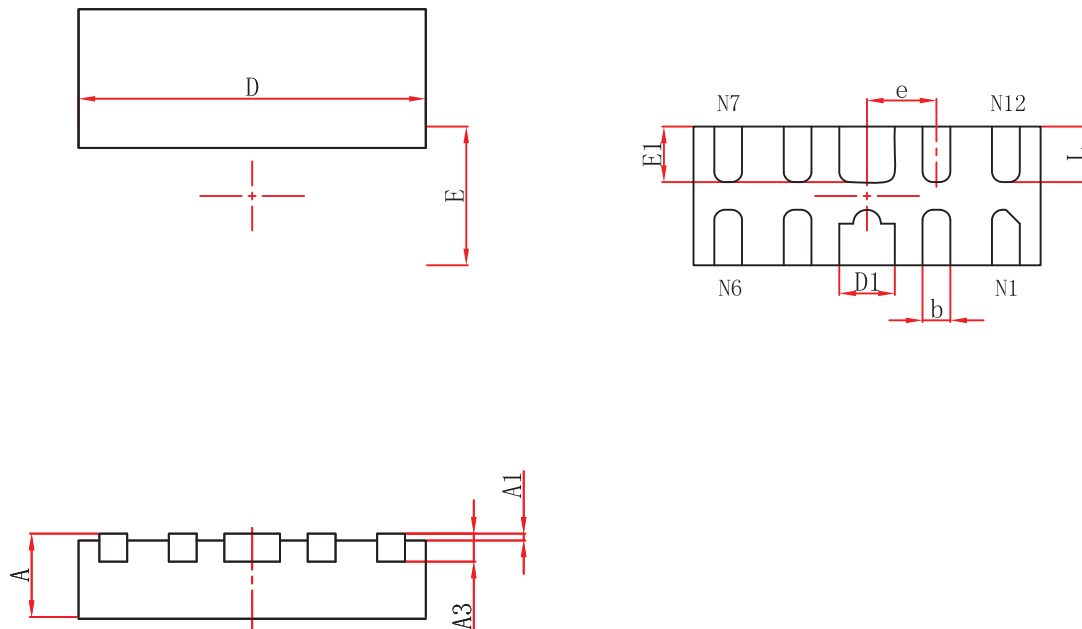
**ESD clamping voltage
(IEC61000-4-2 +8kV contact)**



**ESD clamping voltage
(IEC61000-4-2 -8kV contact)**

Package outline dimensions

DFN2510-10L



Symbol	Dimensions in millimeter		
	Min.	Typ.	Max.
A	0.55	0.60	0.65
A1	-	-	0.05
A3	0.152 Ref.		
D	2.45	2.50	2.55
E	0.95	1.00	1.05
D1	0.35	0.40	0.45
E1	0.35	0.40	0.45
b	0.15	0.20	0.25
L	0.35	0.40	0.45
e	0.500 BSC.		

Recommend Land Pattern (Unit: mm)

