

**ESDA6V8AV5**

**4-Line, Low-Capacitor, Uni-directional  
Transient Voltage Suppressors**

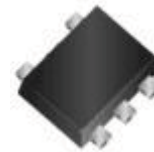
[Http://www.willsemi.com](http://www.willsemi.com)

**Descriptions**

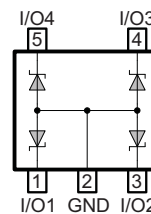
The ESDA6V8AV5 is a transient voltage suppressors (TVS) which provide a very high level protection for sensitive electronic components that may be subjected to electrostatic discharge (ESD). It is designed to replace multilayer varistors (MLV) in consumer equipments applications such as mobile phone, notebook, PAD, STB, LCD TV etc.

The ESDA6V8AV5 was past ESD transient voltage up to  $\pm 8\text{KV}$  (contact) according to IEC61000-4-2 and withstand peak current up to 3A for 8/20us pulse according to IEC61000-4-5.

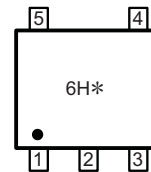
The ESDA6V8AV5 is available in SOT-553 package. Standard products are Pb-free and Halogen-free.



**SOT-553**



**Pin configuration (Top view)**



**6H = Device code**  
**\* = Month code (A~Z)**  
**Marking**

**Features**

- Working voltage : 5V
- Peak power (tp=8/20us) : 36W
- ESD protection
  - IEC61000-4-2 (Contact) :  $\pm 8\text{KV}$
  - IEC61000-4-2 (Air) :  $\pm 15\text{KV}$
- Low leakage current
- Small package

**Applications**

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

**Order information**

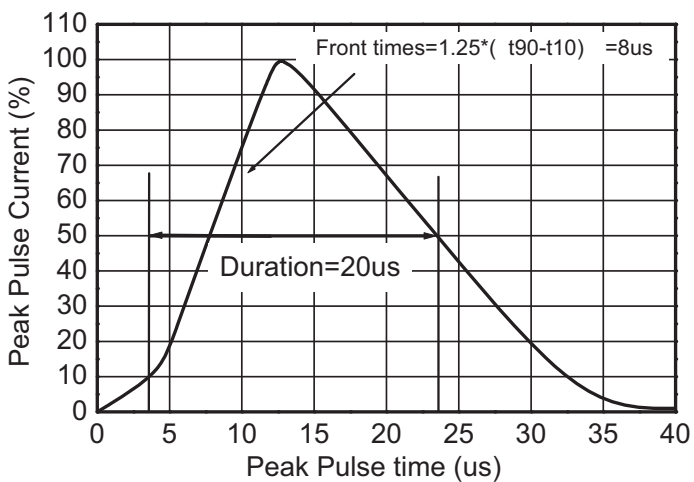
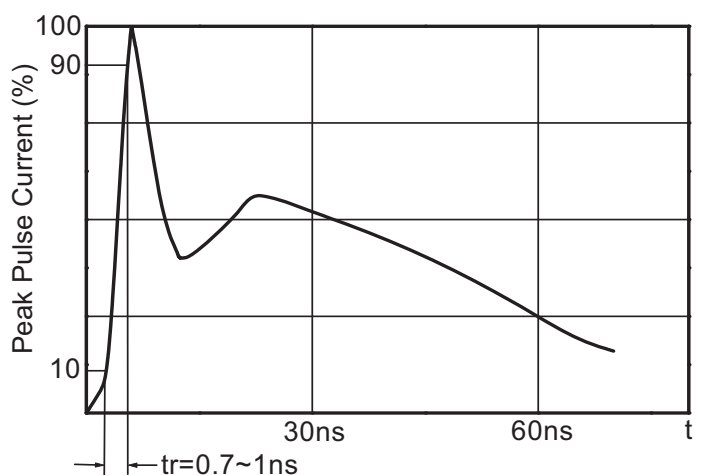
Device	Package	Shipping
ESDA6V8AV5-5/TR	SOT-553	3000/Tape&Reel

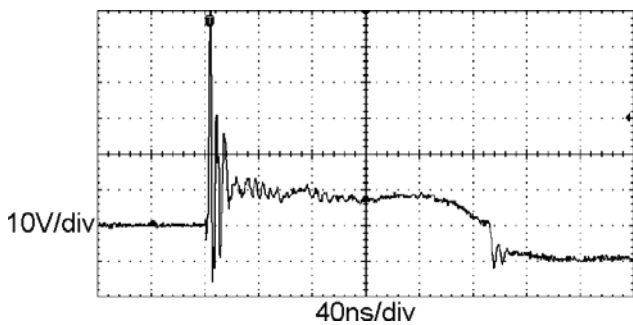
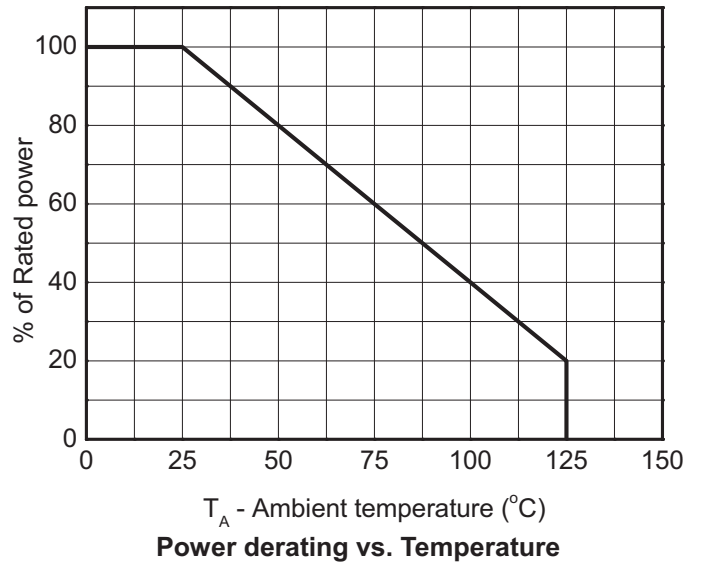
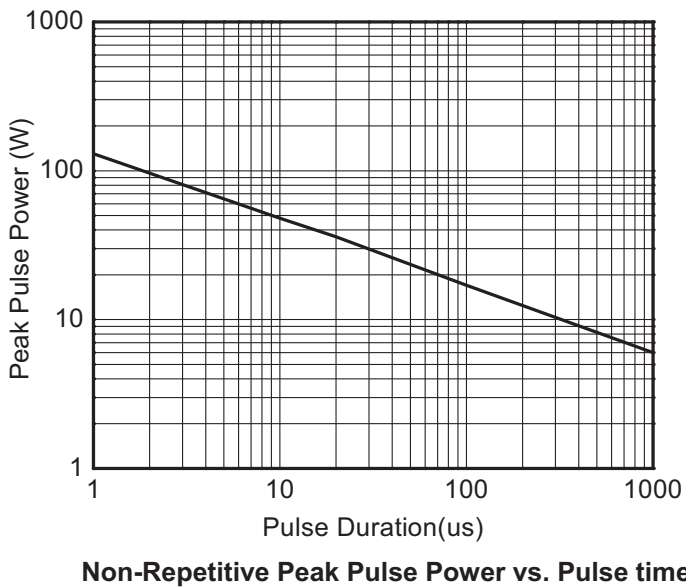
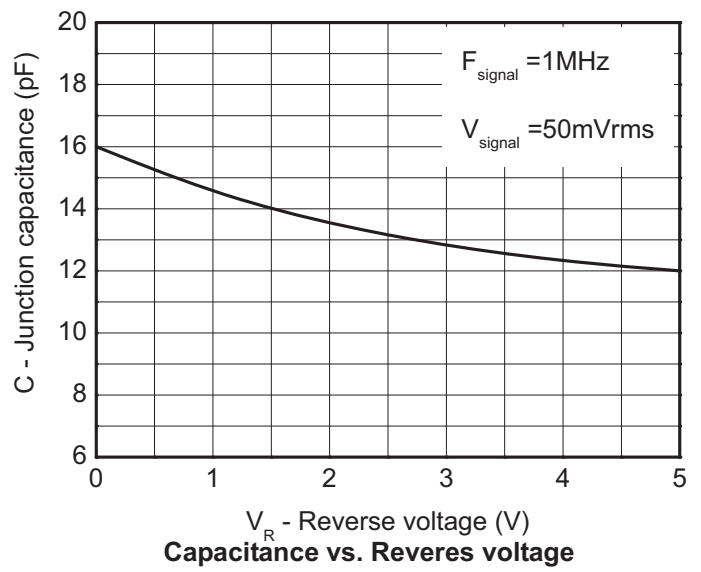
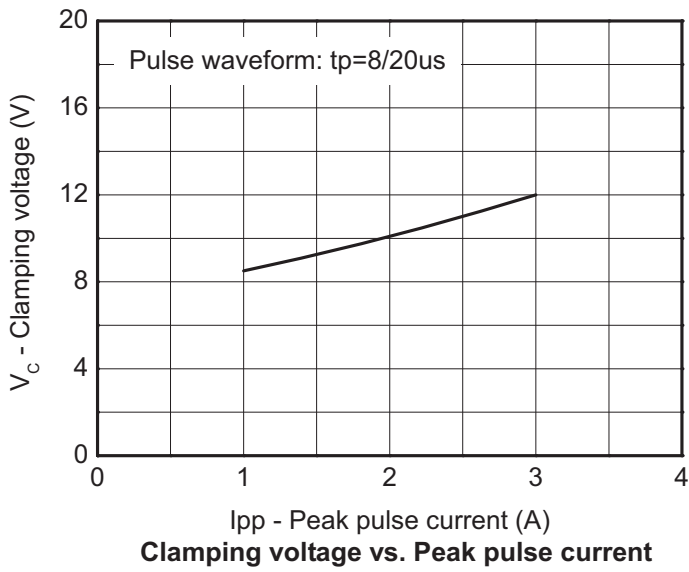
**Absolute maximum ratings**

Parameter	Symbol	Rating	Unit
Peak pulse power (tp=8/20us)	Ppk	36	W
Peak pulse current (tp=8/20us)	Ipp	3	A
ESD voltage IEC61000-4-2 (Contact)	V <sub>ESD</sub>	±8	KV
ESD voltage IEC61000-4-2 (Air)		±15	KV
Operation junction temperature	T <sub>J</sub>	150	°C
Lead temperature	T <sub>L</sub>	260	°C
Storage temperature	T <sub>sg</sub>	-55~150	°C

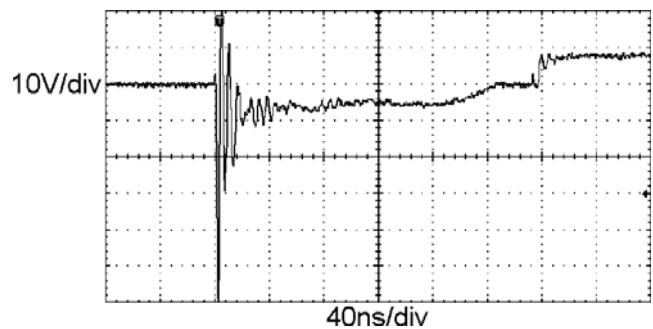
**Electronics characteristics (Ta=25°C, unless otherwise noted)**

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reveres maximum working voltage	V <sub>RWM</sub>	I <sub>R</sub> =1uA			5	V
Reveres leakage current	I <sub>R</sub>	V <sub>RWM</sub> =5V			1	uA
Reveres breakdown voltage	V <sub>BR</sub>	I <sub>T</sub> =1mA	6.2	6.8	7.5	V
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =10mA	0.4	0.8	1.2	V
Clamping voltage	V <sub>C</sub>	Ipp=1A tp=8/20us			9	V
		Ipp=3A tp=8/20us			12	V
Junction capacitance	C <sub>J</sub>	I/O to GND, V <sub>R</sub> =0V, F=1MHz		16	20	pF
Junction capacitance	C <sub>J</sub>	I/O to I/O V <sub>R</sub> =0V, F=1MHz		8	10	pF

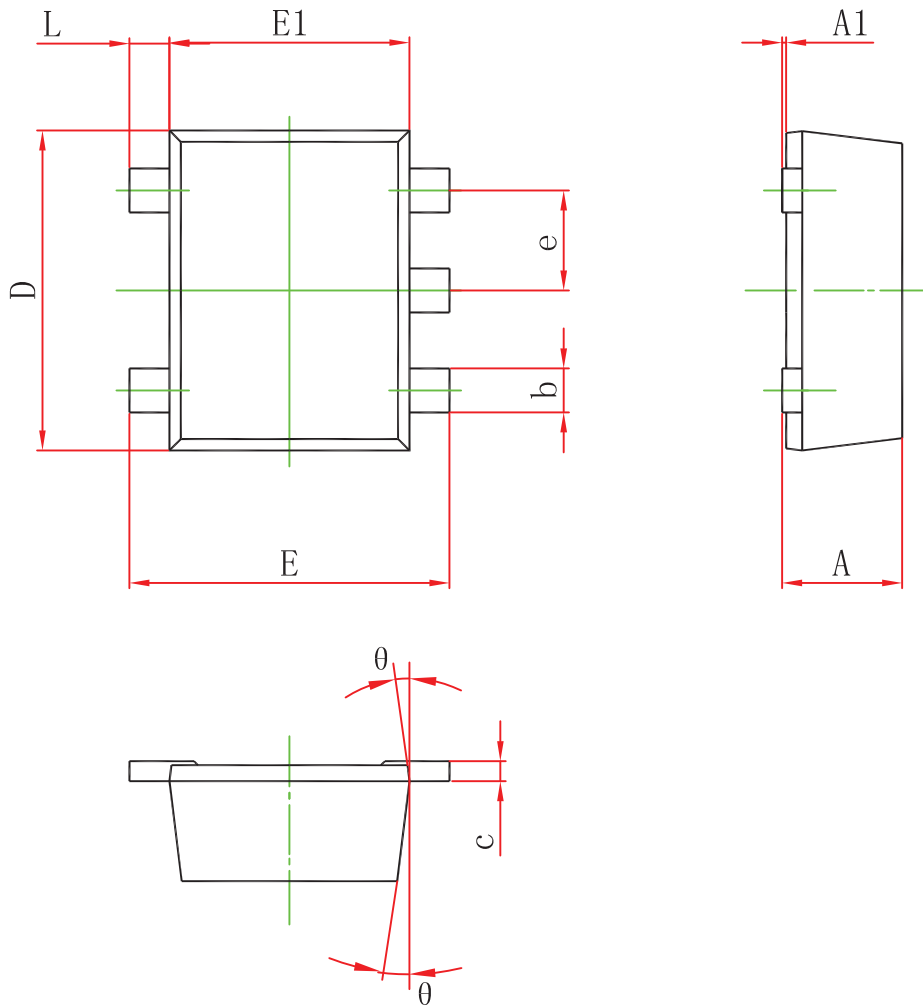

**8/20us waveform**

**IEC61000-4-2 waveform**

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


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



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

**Package outline dimensions**
**SOT-553**


Symbol	Dimensions in millimeter		
	Min.	Typ.	Max.
A	0.525	0.563	0.600
A1	0.000	0.025	0.050
e	0.450	0.500	0.550
c	0.090	0.125	0.160
D	1.500	1.600	1.700
b	0.170	0.220	0.270
E1	1.100	1.200	1.300
E	1.500	1.600	1.700
L	0.100	0.200	0.300
$\theta$	7° REF		