

ESDA6V8UM

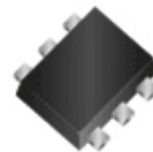
2-Line, Ultra-low Capacitance, Uni-directional Transient Voltage Suppressors

Descriptions

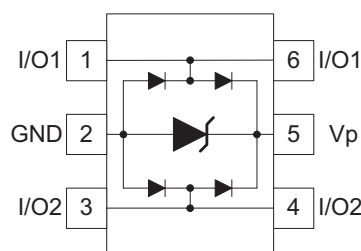
The ESDA6V8UM is a transient voltage suppressors (TVS) which provide a very high level protection for sensitive electronic components that may be subjected to electrostatic discharge (ESD). It is designed to replace multilayer varistors (MLV) in consumer equipments applications such as mobile phone, notebook, PAD, STB, LCD TV etc.

The ESDA6V8UM was past ESD transient voltage up to $\pm 8\text{KV}$ (contact) according to IEC61000-4-2 and withstand peak current up to 2.8A for 8/20us pulse according to IEC61000-4-5.

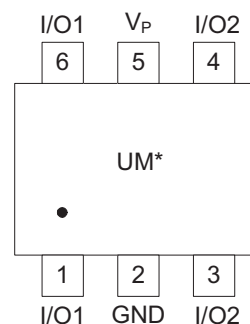
The ESDA6V8UM is available in a SOT-563 package. Standard products are Pb-free and Halogen-free.



SOT-563



Pin configuration (Top view)



UM = Device Code
***** = Month (A~Z)
Marking

Features

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

Applications

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

Order information

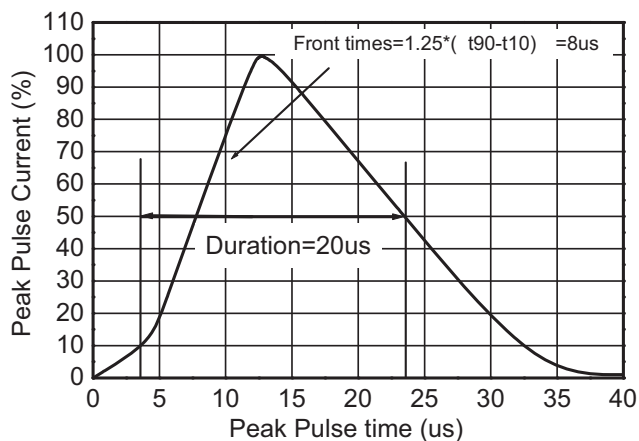
Device	Package	Shipping
ESDA6V8UM-6/TR	SOT-563	3000/Tape&Reel

Absolute maximum ratings

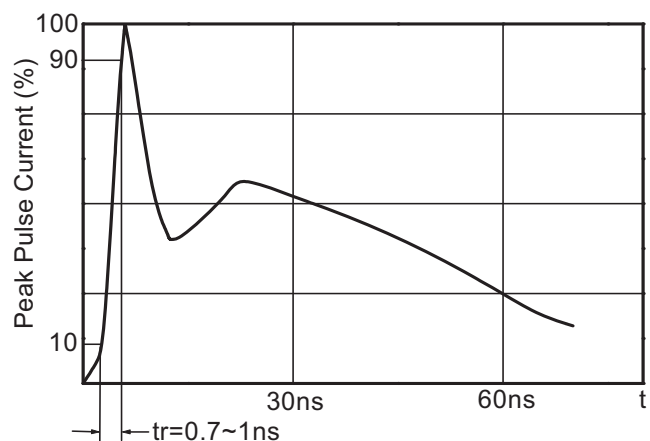
Parameter	Symbol	Rating	Unit
Peak pulse power (tp=8/20us)	Ppk	36	W
Peak pulse current (tp=8/20us)	Ipp	2.8	A
ESD voltage IEC61000-4-2 (Contact)	V _{ESD}	±8	KV
ESD voltage IEC61000-4-2 (Air)	V _{ESD}	±15	KV
Operation junction temperature	T _J	150	°C
Lead temperature	T _L	260	°C
Storage temperature	T _{sg}	-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	V
Reveres leakage current	I _R	V _{RWM} =5V			1	uA
Reveres breakdown voltage	V _{BR}	I _T =1mA	6.5			V
Forward voltage	V _F	I _F =10mA	-0.4		-1.4	V
Clamping voltage	V _C	Ipp=1A tp=8/20us			10	V
		Ipp=2.8A tp=8/20us			13	V
Junction capacitance	C _J	I/O to GND VR=0V, F=1MHz		0.7	1.0	pF
Junction capacitance	C _J	I/O to I/O VR=0V, F=1MHz		0.35	0.5	pF



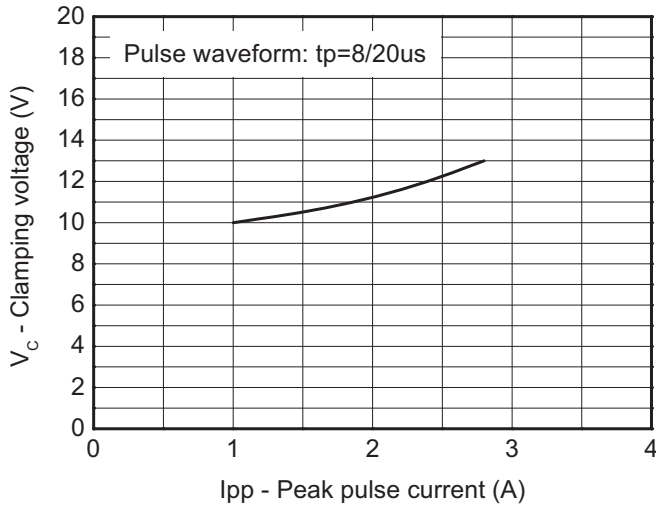
8/20us waveform



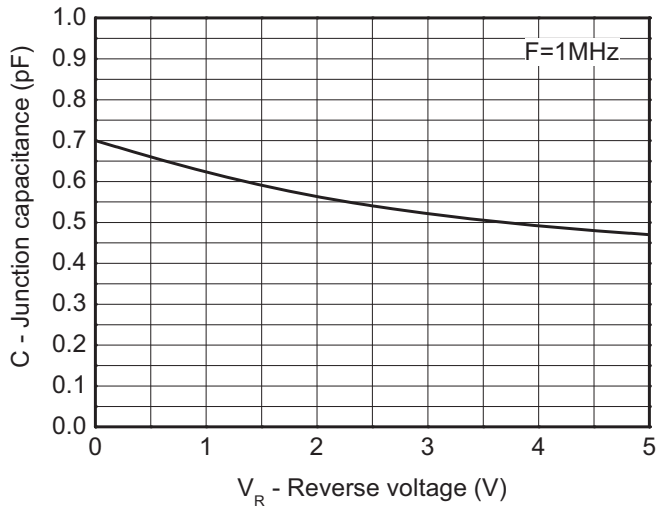
IEC61000-4-2 waveform

ESDA6V8UM

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



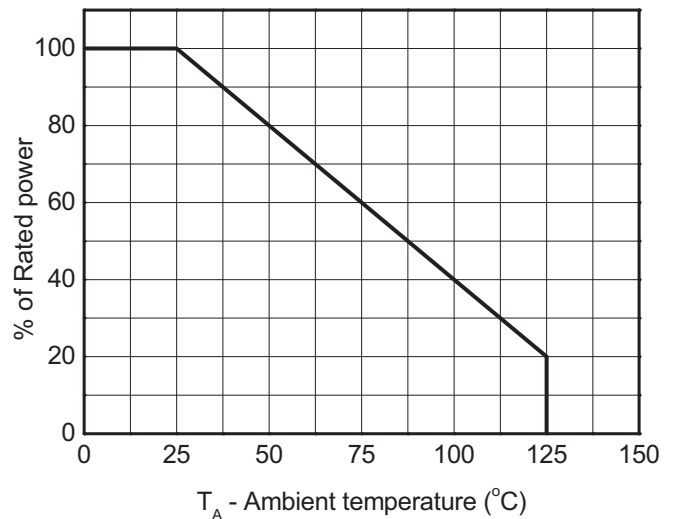
Clamping voltage vs. Peak pulse current



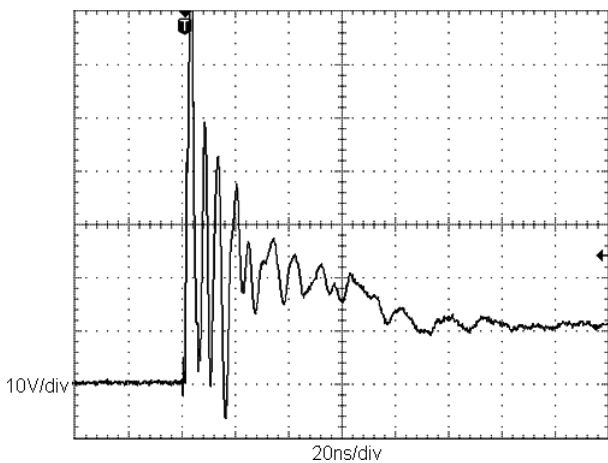
Capacitance vs. Reverse voltage



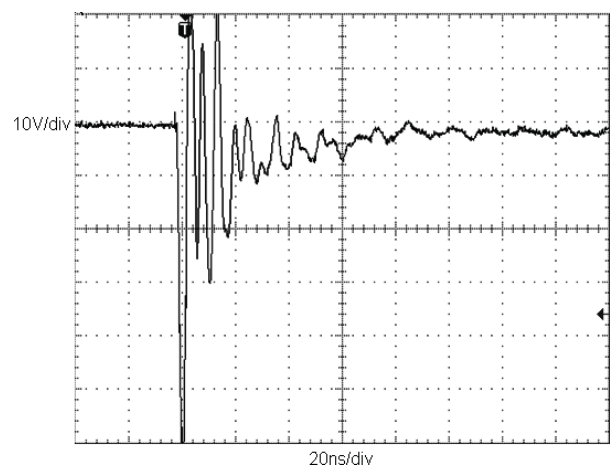
Non-Repetitive Peak Pulse Power vs. Pulse time



Power derating vs. Temperature



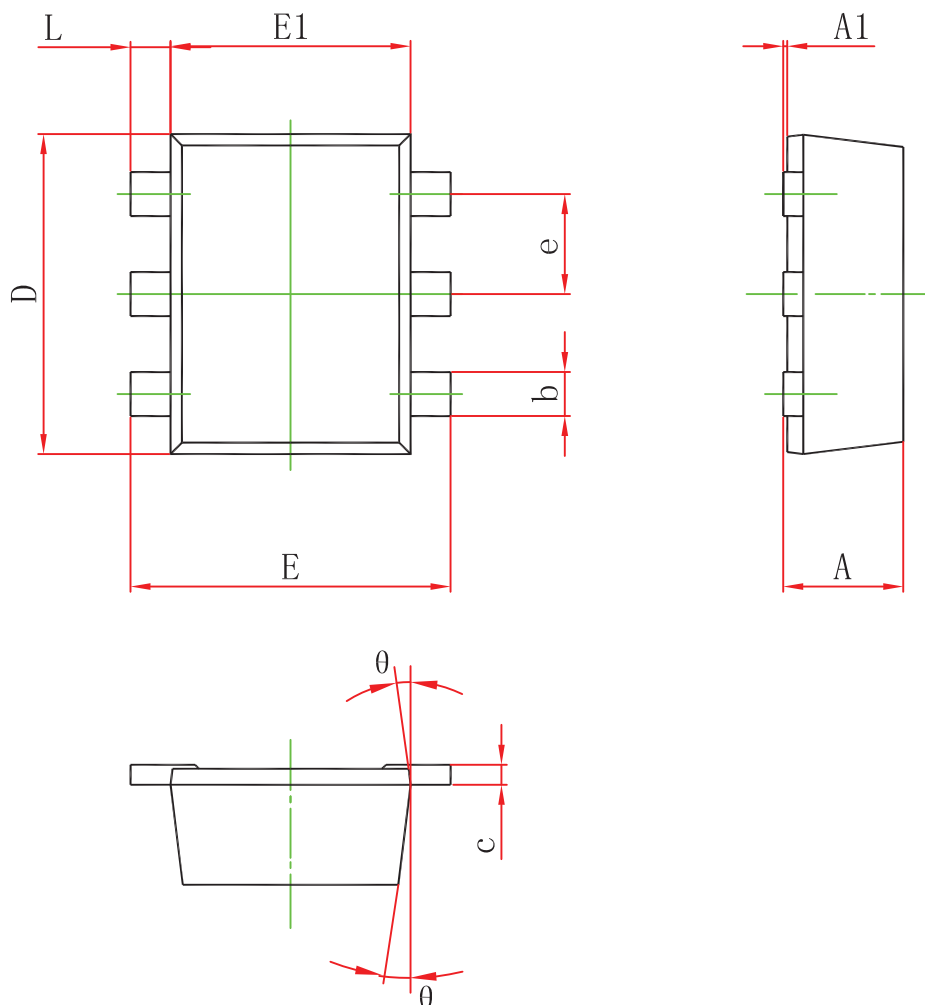
**ESD Clamping
(IEC61000-4-2 +8KV contact)**



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

Package outline dimensions

SOT-563



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
θ	7° REF		