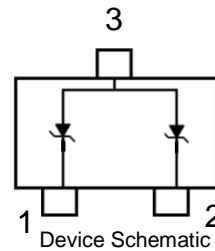


## Description

The CESD3V3AP is a Transient Voltage Suppressor Arrays that designed to protect components which are connected to data and transmission lines against electrostatic discharge (ESD), electrical fast Transients (EFT), and lightning.



## Features

- IEC 61000-4-2 Level 4 ESD Protection
  - ±30kV Contact Discharge
  - ±30kV Air Discharge
- 500W Peak pulse Power (8/20us)
- Low clamping
- voltage Working
- voltage: 3.3V
- Low leakage current
- ESD Protection > 15kV
- Protecting one bidirectional or two unidirectional lines

## Applications

- Portable electronics
- Control & monitoring systems
- Servers, notebooks, and desktop PCs
- Set-top box
- Communication systems

**Absolute Maximum rating** Over operating free-air temperature range (unless otherwise noted)

Parameters	Symbol	Min.	Max.	Unit
Peak pulse power (tp=8/20us)@25°C	P <sub>pk</sub>		500	W
Peak pulse current (tp=8/20us)@25°C	I <sub>PP</sub>		25	A
ESD (IEC61000-4-2 air discharge) @25°C	V <sub>ESD</sub>		± 30	kV
ESD (IEC61000-4-2 contact discharge) @25°C	V <sub>ESD</sub>		± 30	kV
Junction temperature	T <sub>J</sub>		150	°C
Operating temperature	T <sub>OP</sub>	-40	125	°C
Storage temperature	T <sub>STG</sub>	-55	150	°C
Lead temperature	T <sub>L</sub>		260	°C

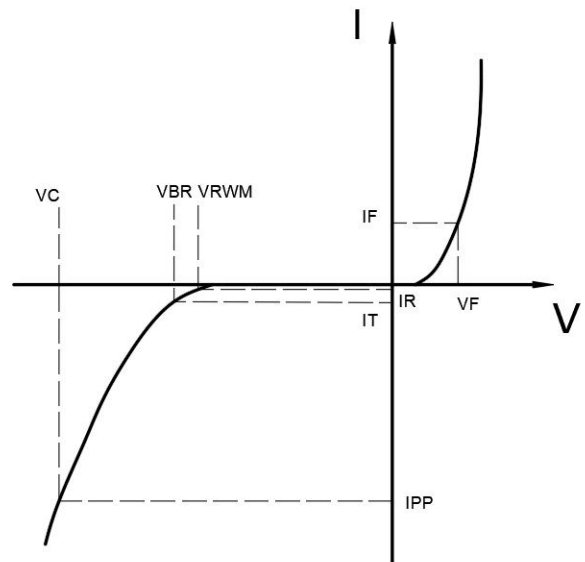
Table-3 Absolute Maximum rating

**Electrical Characteristics** At TA = 25°C unless otherwise noted

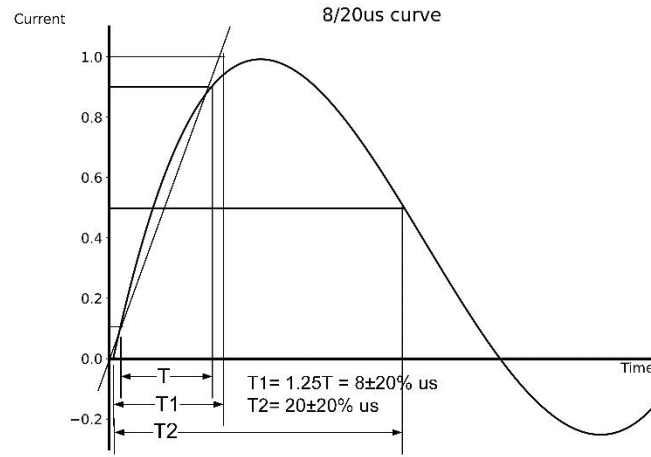
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	$V_{RWM}$				3.3	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	4.0			V
Reverse Leakage Current	$I_R$	$V_{RWM}=3V$			1	$\mu A$
Clamping Voltage	$V_C$	$I_{PP}=1A; t_p=8/20\mu s$		8		V
Clamping Voltage	$V_C$	$I_{PP}=25A; t_p=8/20\mu s$		20		V
Junction Capacitance	$C_J$	$V_R=0V; f=1MHz$		400		pF

Table-4 Electrical Characteristics

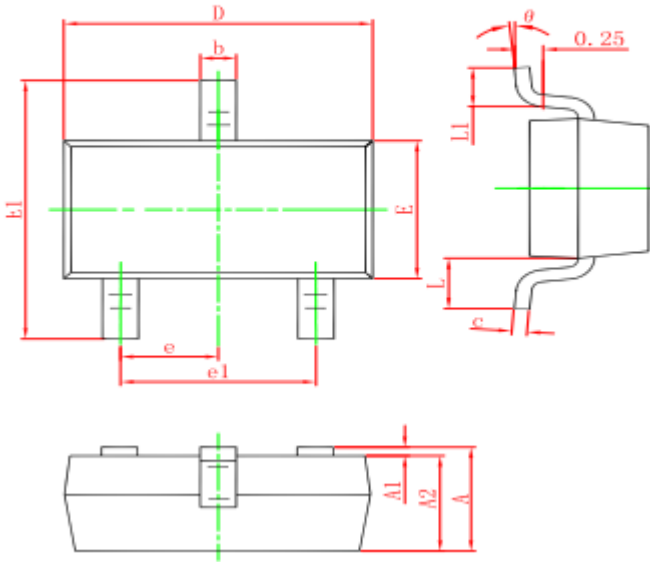
Symbol	Parameters
$V_{RWM}$	Peak Reverse Working Voltage
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$



Typical Characteristic

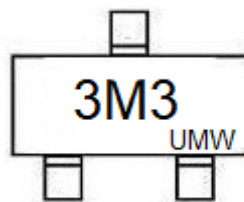


**SOT-23 PACKAGE OUTLINE DIMENSIONS**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.800	2.000	0.071	0.079
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

**Marking**



**Ordering information**

Order code	Package	Baseqty	Deliverymode
UMW CESD3V3AP	SOT-23	3000	Tape and reel