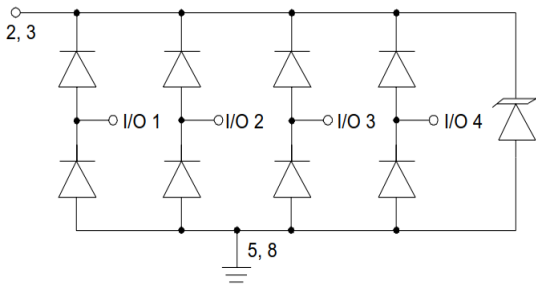


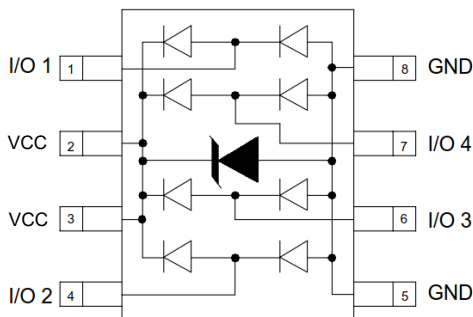
## Features

- Array of surge rated diodes with internal TVS diode
- Protects four I/O lines
- Low capacitance (<15pF) for high-speed interfaces
- Low operating voltage: 3.3V
- Low clamping voltage
- Solid-state technology
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test  
Air discharge:  $\pm 15\text{kV}$   
Contact discharge:  $\pm 8\text{kV}$
  - IEC61000-4-5 (Lightning) 24A (8/20 $\mu\text{s}$ )

## Dimensions and Pin Configuration



Circuit and Pin Schematic



**SO-8 (Top View)**

SO-8 Outline

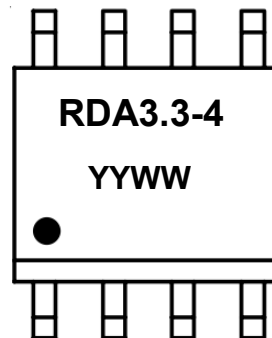
## Mechanical Characteristics

- Package: SO-8
- Lead Finish: SnPb or Matte Sn
- Molding compound flammability rating: UL 94V-0
- Terminal Connections: See Diagram Below
- Marking Information: See Below

## Applications

- T1/E1 secondary IC Side Protection
- T3/E3 secondary IC Side Protection
- Analog Video Protection
- Microcontroller Input Protection
- Base stations
- I2C Bus Protection

## Marking Information



RDA3.3-4=Device  
Marking Code  
YYWW = Date Code  
Dot denotes Pin1

## Ordering Information

Part Number	Packaging	Reel Size
ASRDA3.3-4	2500/Tape & Reel	13 inch

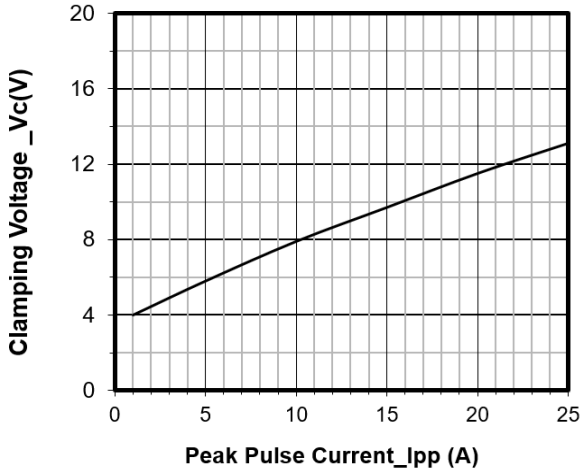
**Absolute Maximum Ratings ( $T_A=25^{\circ}\text{C}$  unless otherwise specified)**

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 $\mu\text{s}$ )	Ppk	500	W
Peak Pulse Current (8/20 $\mu\text{s}$ )	I <sub>PP</sub>	25	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V <sub>ESD</sub>	$\pm 15$ $\pm 8$	kV
Lead Soldering Temperature	TL	260(10 sec.)	$^{\circ}\text{C}$
Operating Temperature Range	T <sub>J</sub>	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	$^{\circ}\text{C}$

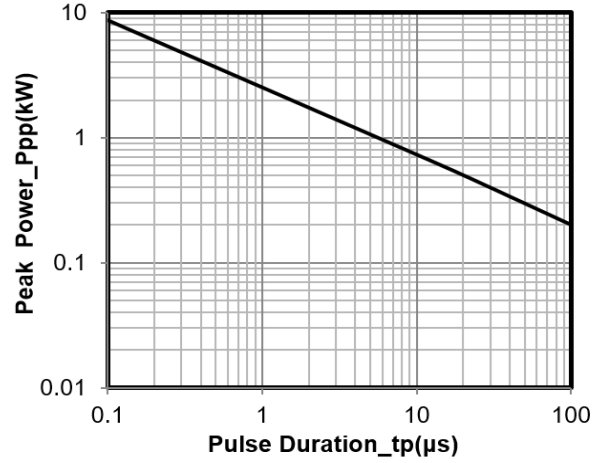
**Electrical Characteristics ( $T_A=25^{\circ}\text{C}$  unless otherwise specified)**

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V <sub>RWM</sub>			3.3	V	
Punch-Through Voltage	V <sub>PT</sub>	3.5			V	I <sub>T</sub> = 2 $\mu\text{A}$
Snapback Voltage	V <sub>SB</sub>	2.8			V	I <sub>SB</sub> = 50mA
Reverse Leakage Current	I <sub>R</sub>			0.5	$\mu\text{A}$	V <sub>RWM</sub> = 3.3V
Clamping Voltage	V <sub>C</sub>			5.3	V	I <sub>PP</sub> = 1A (8 x 20 $\mu\text{s}$ pulse)
Clamping Voltage	V <sub>C</sub>			10	V	I <sub>PP</sub> = 10A (8 x 20 $\mu\text{s}$ pulse)
Clamping Voltage	V <sub>C</sub>			15	V	I <sub>PP</sub> = 25A (8 x 20 $\mu\text{s}$ pulse)
Junction Capacitance	C <sub>J</sub>		8	15	pF	V <sub>R</sub> = 0V, f = 1MHz, Between I/O pins and Ground
			4		pF	V <sub>R</sub> = 0V, f = 1MHz, Between I/O pins

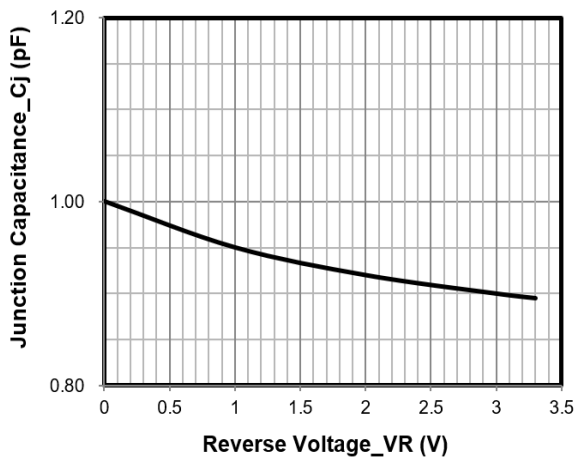
**Typical Performance Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise Specified)**



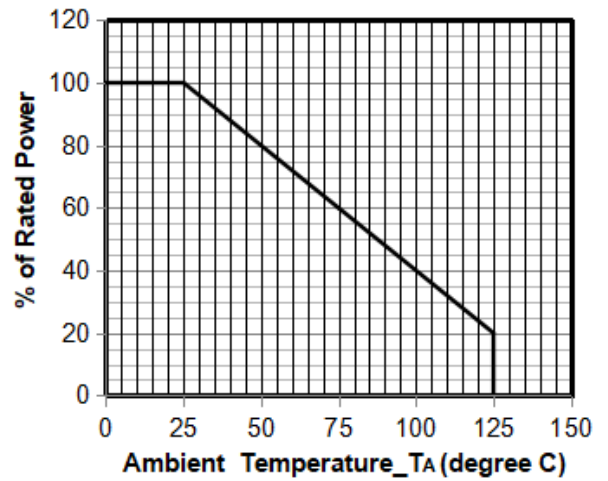
**Junction Capacitance vs. Reverse Voltage**



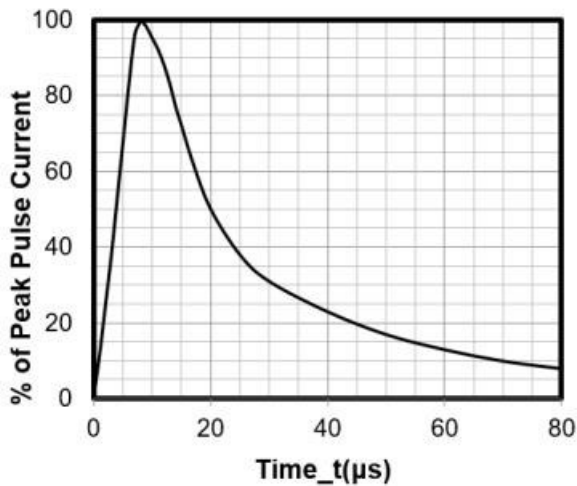
**Peak Pulse Power vs. Pulse Time**



**Clamping Voltage vs. Peak Pulse Current**

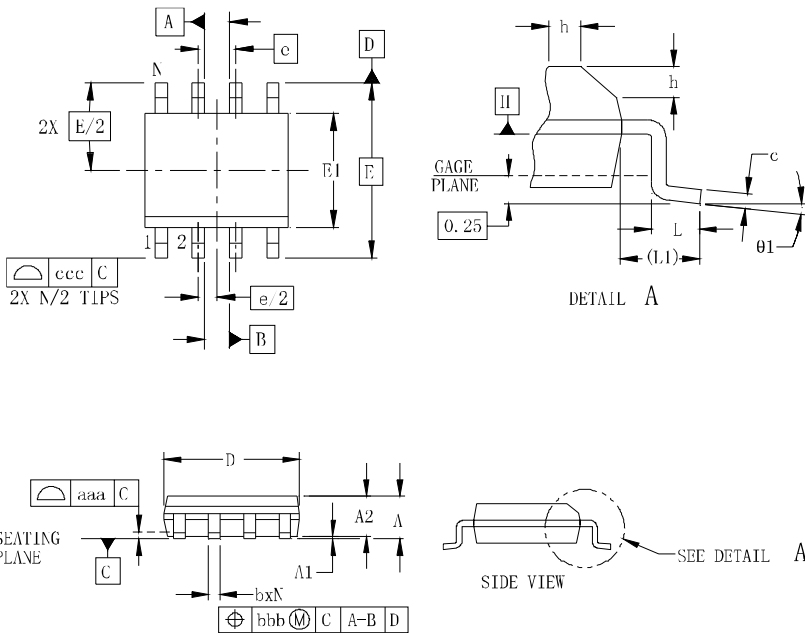


**Power Derating Curve**



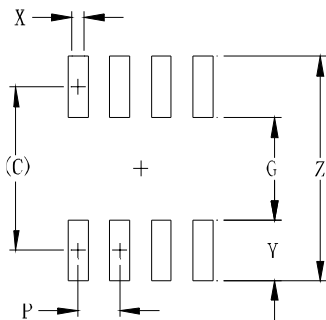
**8 X 20 $\mu\text{s}$  Pulse Waveform**

### SO-8 Package Outline Drawing



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.35		1.75	0.053		0.069
A1	0.10		0.25	0.004		0.010
A2	1.25		1.65	0.049		0.065
b	0.31		0.51	0.012		0.020
c	0.17		0.25	0.007		0.010
D	4.80	4.90	5.00	0.189	0.193	0.197
E1	3.80	3.90	4.00	0.150	0.154	0.157
E	6.00 BSC			0.236 BSC		
e	1.27 BSC			0.050 BSC		
h	0.25		0.50	0.010		0.020
L	0.40	0.72	1.04	0.016	0.028	0.041
L1	(1.04)			(0.041)		
N	8			8		
$\theta 1$	0°		8°	0°		8°
aaa	0.10			0.004		
bbb	0.25			0.010		
ccc	0.20			0.008		

### Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
C	(5.20)	0.205
G	3.00	0.118
P	1.27	0.050
X	0.60	0.024
Y	2.20	0.087
Z	7.40	0.291

### Contact Information

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