

### ➤ General Description

The PAE3312W is designed with latest process TVS technology to protect voltage sensitive components from ESD. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to ESD. Because of its small size, it is suited for use in cellular phones, MP3 players, digital cameras and many other portable applications where board space comes at a premium.

It has been specifically designed to protect sensitive components which are connected to data and transmission lines from overvoltage caused by ESD(electrostatic discharge), and EFT (electrical fast transients).

### ➤ Feature

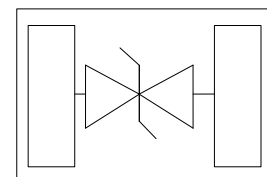
- Peak Power Dissipation –50W ( 8 x 20 us Waveform)
- Stand-off Voltage: 3.3V
- Low capacitance for high-speed interfaces
- Protects I/O Port
- Low Clamping Voltage
- Low Leakage
- Meets MSL 1 Requirements
- ROHS compliant

### ➤ DFN0603-2



### ➤ Application

- High Speed Line : USB1.0/2.0,VGA
- Serial and Parallel Ports
- Notebooks, Desktops, Servers
- Projection TV
- Cellular handsets and accessories
- Portable instrumentation
- Peripherals



### ➤ Protection solution to meet

- IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)

### ➤ Maximum Ratings (TA=25°C Unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	PPP	50	Watts
Peak Pulse Current(tp=8/20μs waveform)	IPP	5	A
ESD Rating per IEC61000-4-2:	Contact	30	KV
	Air	30	
Lead Soldering Temperature	TL	260 (10 sec.)	°C
Operating Temperature Range	TJ	-55 ~ 150	°C
Storage Temperature Range	TSTG	-55 ~ 150	°C
Lead Solder Temperature – Maximum (10 Second Duration)	TL	260	°C

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

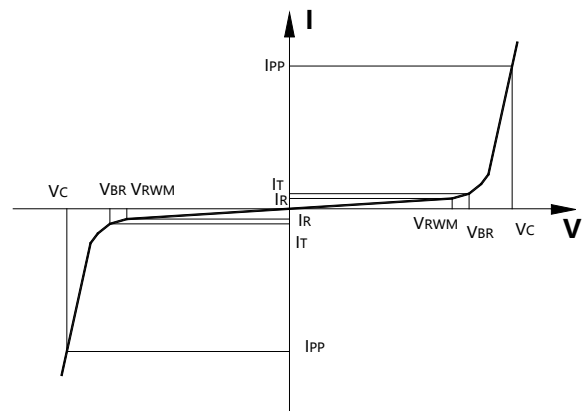
\*Other voltages may be available upon request.

1. Non-repetitive current pulse, per Figure 1.

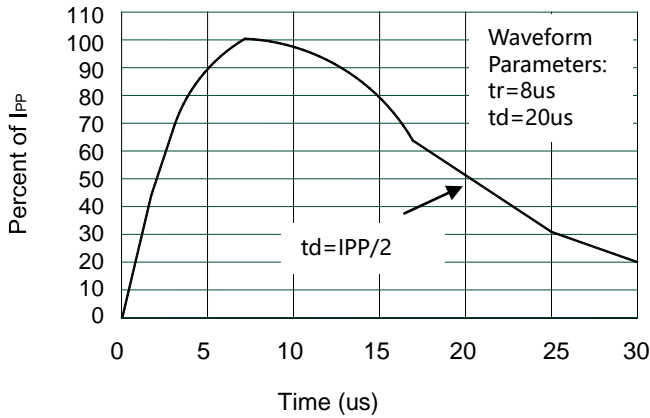
### ➤ Electrical Characteristics (TA=25°C Unless otherwise specified)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
VRWM	Reverse Working Voltage				3.3	V
VBR	Breakdown Voltage	IT = 1mA,	3.8			V
IR	Reverse Leakage Current	VRWM = 3.3V,		0.01	0.5	uA
VC	Clamping Voltage	IPP = 1A, tp = 8/20μs,		6		V
		IPP = 5A, tp = 8/20μs,		8	10	V
CJ	Junction Capacitance	VR = 0V, f = 1MHz,		13	20	pF

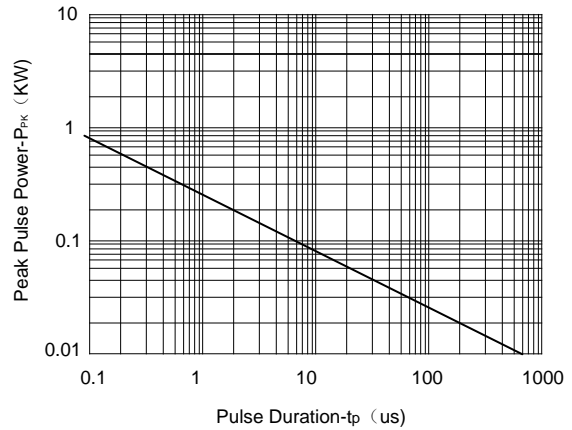
Symbol	Parameter
VRWM	Working Peak Reverse Voltage
VBR	Breakdown Voltage @ IT
VC	Clamping Voltage @ IPP
IT	Test Current
IRM	Leakage current at VRWM
IPP	Peak pulse current
CO	Off-state Capacitance
CJ	Junction Capacitance



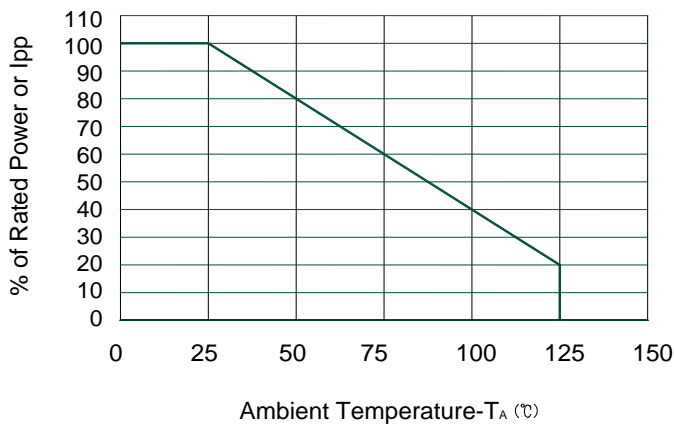
### ➤ Typical Characteristics



**Pulse Waveform**



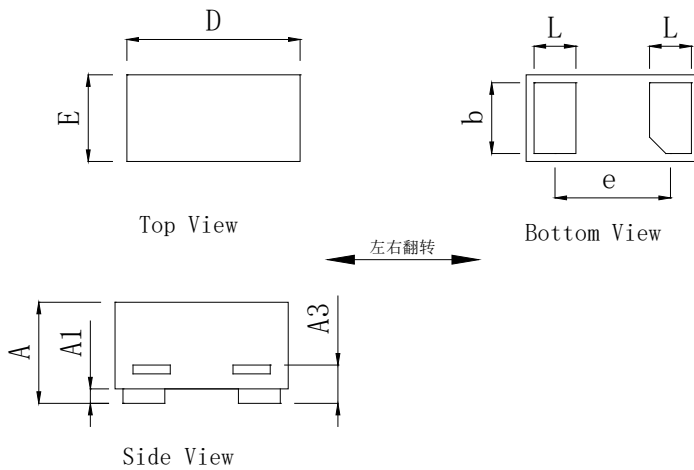
**Non-Repetitive Peak Pulse Power vs. Pulse Time**



**Power Derating Curve**

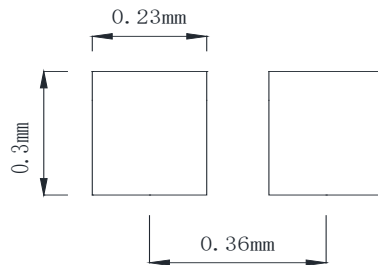
### ➤ Package Information (DFN0603-2)

Case Material: Molded Plastic. UL Flammability



DIM	Millimeters	
	Min	Max
A	0.230	0.330
A1	0.000	0.050
A3	0.102REF	
D	0.550	0.650
E	0.250	0.350
b	0.215	0.275
L	0.115	0.175
e	0.40BSC	

### Recommended Pad outline



### ➤ Ordering Information

Part Number	Description	Quantity
PAE3312W	DFN0603-2 Reel	15000 pcs

## **DISCLAIMER**

- The information in this document and any product described herein are subject to change without notice and should not be construed as a commitment by Paceleader, Paceleader reserve the right to make changes to the information in this document.
- Though Paceleader make effort to improve product quality and reliability, Product can malfunction and fail due to their inherent electrical sensitivity and vulnerability to physical stress, it is the responsibility of the customer, when utilizing Paceleader products, to comply with the standards of safety in making a safe design for entire system and to avoid situation in which a malfunction or failure., In developing a new designs, customer should ensure that the device which shown in this documents are used within specified operatingranges.
- The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by Paceleader for any infringements of patents or other rights of the third parties which may result from its use.