

**SEDFN05V4**  
**Ultra Low Capacitance TVS Arrays**

Revision:B

**Features**

- Package design optimized for high speed lines
- Flow-Through design
- Protects four I/O lines
- Low capacitance: 0.3pF typical (I/O to I/O)
- Low clamping voltage
- Low operating voltage: 5V
- Solid-state silicon-avalanche technology

**Applications**

- High Definition Multi-Media Interface (HDMI).
- Digital Visual Interface (DVI)
- DisplayPort™ Interface
- MDDI Ports
- LVDS
- Serial ATA
- PCI Express

**General Description**

SEDFN05V4 are ultra low capacitance TVS arrays designed to protect high speed data interfaces. This series has been specifically designed to protect sensitive components which are connected to high-speed data and transmission lines from overvoltage caused by ESD(electrostatic discharge),CDE(Cable Discharge Events),and EFT(electrical fast transients)

**Complies with the following standards**

**IEC61000-4-2**

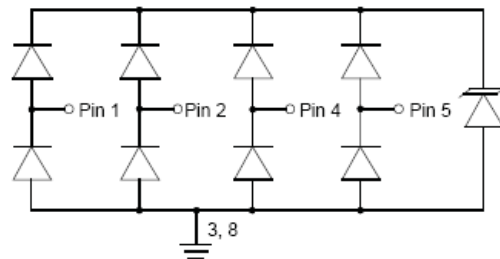
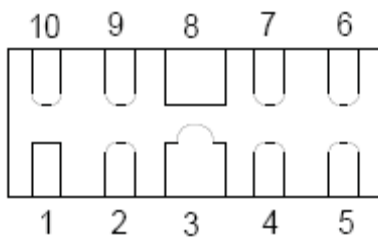
**Level 4 25 kV (air discharge)**

**12 kV(contact discharge)**

**MIL STD 883E - Method 3015-7 Class 3**

**25 kV HBM (Human Body Model)**

**Functional diagram**

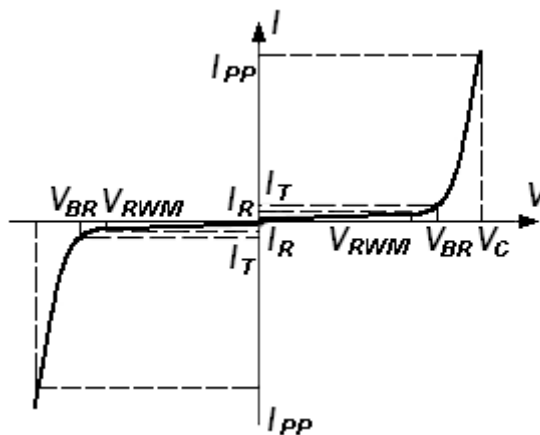


**Absolute Maximum Ratings**

Symbol	Parameter	Value	Units
P pk	Peak Pulse Power (tp = 8/20μs)	150	Watts
I PP	Peak Pulse Current (tp = 8/20μs)	5	A
V ESD	ESD per IEC 61000-4-2 (Air)	+/- 25	kV
	ESD per IEC 61000-4-2 (Contact)	+/- 12	
TJ	Operating Temperature	-55 to +125	°C
T STG	Storage Temperature	-55 to +150	°C

## Electrical Parameter

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

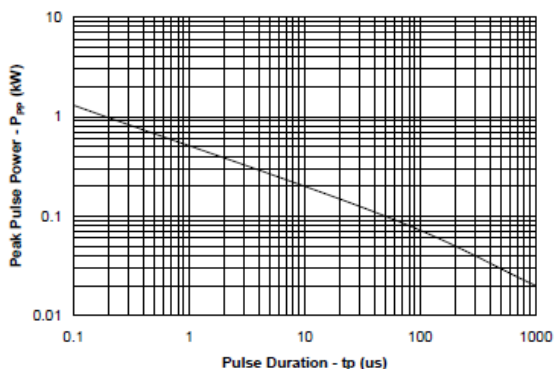


## Electrical Characteristics (Tamb=25°C)

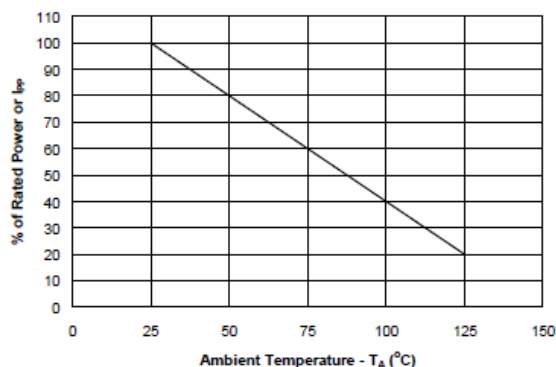
	$V_{BR}$	$V_C$	$V_{RWM}$	$I_{RWM}$	C Typ 0v bias
	Min.				
	V				
SEDFN05V4	6	15	5	1	0.30

## Typical Characteristics

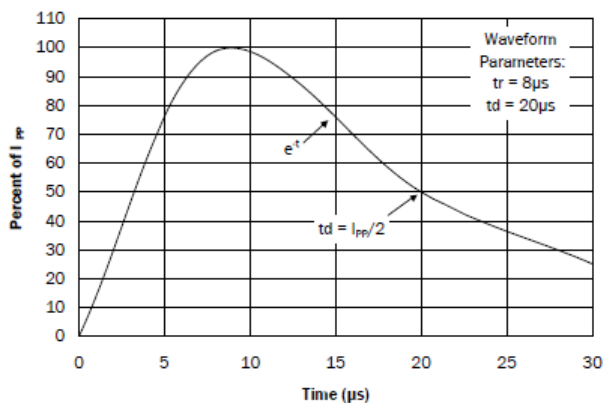
Non-Repetitive Peak Pulse Power vs. Pulse Time



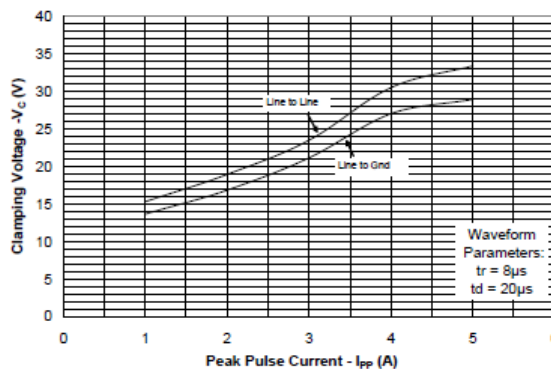
Power Derating Curve



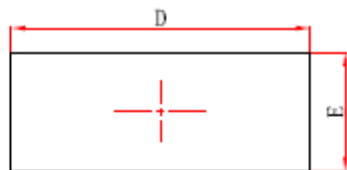
Pulse Waveform



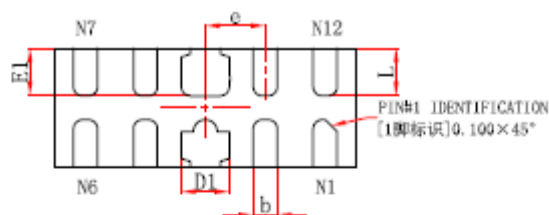
Clamping Voltage vs. Peak Pulse Current



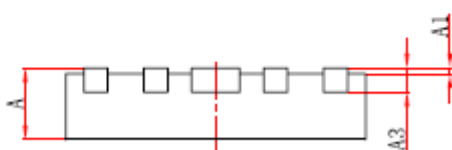
## DFN-10 Mechanical Data



Top View



Bottom View



Side View

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.450/0.550	0.550/0.650	0.018/0.022	0.022/0.026
A1	0.000	0.050	0.000	0.002
A3	0.152REF.		0.006REF.	
D	2.450	2.550	0.096	0.100
E	0.950	1.050	0.037	0.041
D1	0.350	0.450	0.014	0.018
E1	0.350	0.450	0.014	0.018
k	—	—	—	—
b	0.150	0.250	0.006	0.010
e	0.500TYP.		0.020TYP.	
L	0.350	0.450	0.014	0.018

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