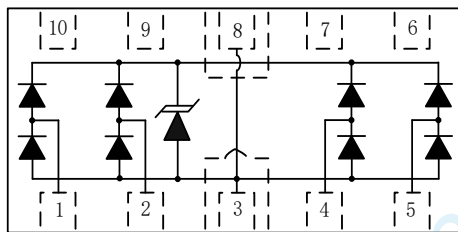


## Surface Mount Transient Voltage Suppressor Diode Array

### Features

- ✧ ESD protection of four I/O lines
- ✧ Solid-state silicon-avalanche technology
- ✧ Working Voltage: 5.5V
- ✧ Peak Power up to 75 Watts @ 8 x 20μs Pulse
- ✧ Low Leakage current
- ✧ Response Time is Typically < 1 ns
- ✧ IEC 61000-4-2 (ESD) ±25kV (air), ±25kV (contact)
- ✧ IEC 61000-4-4 (EFT) 40A (5/50ns)
- ✧ AEC-Q101 Qualified



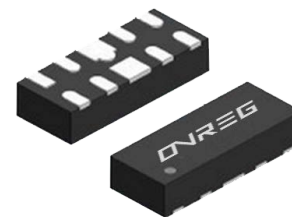
Circuit Diagram

### Applications

- ✧ Cellular Handsets & Accessories
- ✧ Portable devices
- ✧ HDMI1.3/1.4/2.0

### Mechanical Data

- ✧ UL Flame Rating : UL94V-0
- ✧ Reel Size : 7 inch
- ✧ RoHS/WEEE Compliant



DFN2510-10

### Absolute Maximum Rating at $T_A = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

| Rating                                                         | Symbol    | Value          | Units              |
|----------------------------------------------------------------|-----------|----------------|--------------------|
| Peak Pulse Power ( $t_p = 8/20\mu\text{s}$ )                   | $P_{PP}$  | 75             | Watts              |
| Peak Pulse Current ( $t_p = 8/20\mu\text{s}$ ) (note1)         | $I_{pp}$  | 5              | A                  |
| ESD per IEC 61000-4-2 (Air)<br>ESD per IEC 61000-4-2 (Contact) | $V_{ESD}$ | ±25<br>±25     | kV                 |
| Lead Soldering Temperature                                     | $T_L$     | 260(10seconds) | $^{\circ}\text{C}$ |
| Junction Temperature                                           | $T_J$     | -55 to + 125   | $^{\circ}\text{C}$ |
| Storage Temperature                                            | $T_{stg}$ | -55 to + 150   | $^{\circ}\text{C}$ |

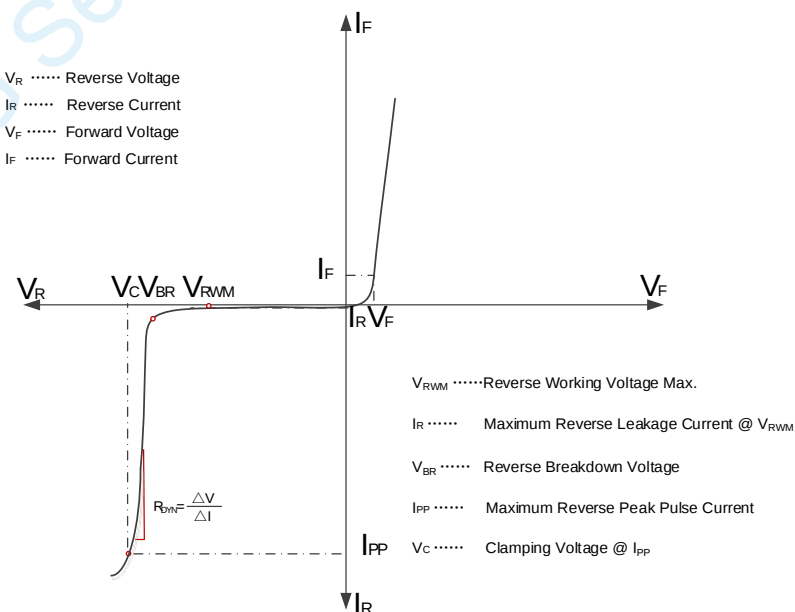
## Electrical Characteristics at $T_A = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

| Parameter                 | Symbol    | Conditions                                             | Min.       | Typical | Max. | Units         |
|---------------------------|-----------|--------------------------------------------------------|------------|---------|------|---------------|
| Reverse Stand-Off Voltage | $V_{RWM}$ |                                                        |            |         | 5.5  | V             |
| Reverse Breakdown Voltage | $V_{BR}$  | $I_T=1\text{mA}$                                       | 6.0        |         |      | V             |
| Reverse Leakage Current   | $I_R$     | $V_{RWM}=5.0\text{V}$ , $T=25\text{ }^{\circ}\text{C}$ |            |         | 1.0  | $\mu\text{A}$ |
| Peak Pulse Current        | $I_{PP}$  | $t_p=8/20\mu\text{s}$                                  |            |         | 5.0  | A             |
| Clamping Voltage          | $V_C$     | $I_{PP}=1\text{A}$ , $t_p=8/20\mu\text{s}$             |            | 7.6     | 9.0  | V             |
| Clamping Voltage          | $V_C$     | $I_{PP}=5\text{A}$ , $t_p=8/20\mu\text{s}$             |            | 12      | 15.0 | V             |
| ESD Clamping Voltage      | $V_C$     | $t_p=0.2/100\text{ns}$ , $I_{TLP}=4\text{A}$           |            | 10.0    |      | V             |
| ESD Clamping Voltage      | $V_C$     | $t_p=0.2/100\text{ns}$ , $I_{TLP}=16\text{A}$          |            | 17.0    |      | V             |
| Dynamic Resistance        | $R_{DYN}$ | $t_p=0.2/100\text{ns}$                                 |            | 0.58    |      | $\Omega$      |
| Junction Capacitance      | $C_J$     | $V_R = 0\text{V}$ ,<br>$f = 1\text{MHz}$               | I/O to I/O | 0.30    | 0.40 | pF            |
|                           |           |                                                        | I/O to GND | 0.50    | 0.60 |               |

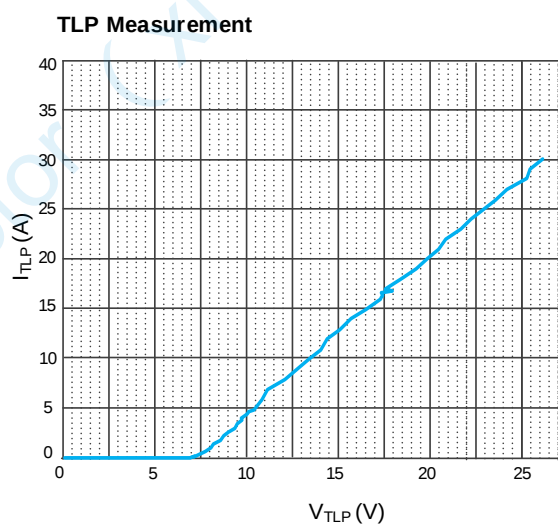
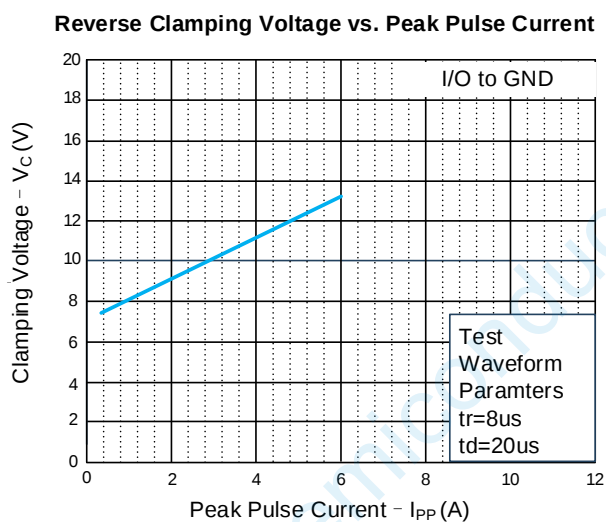
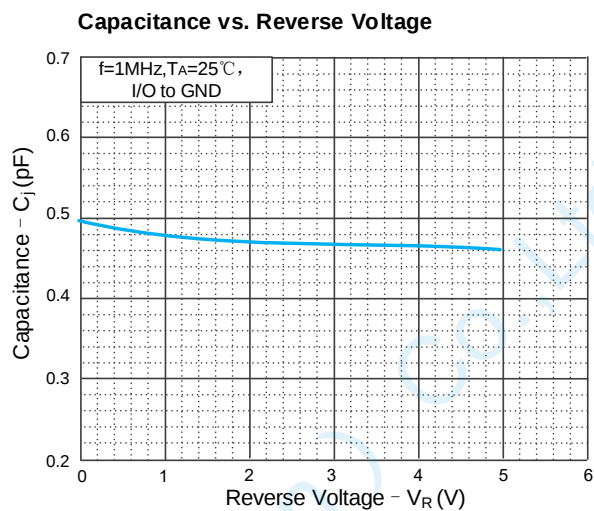
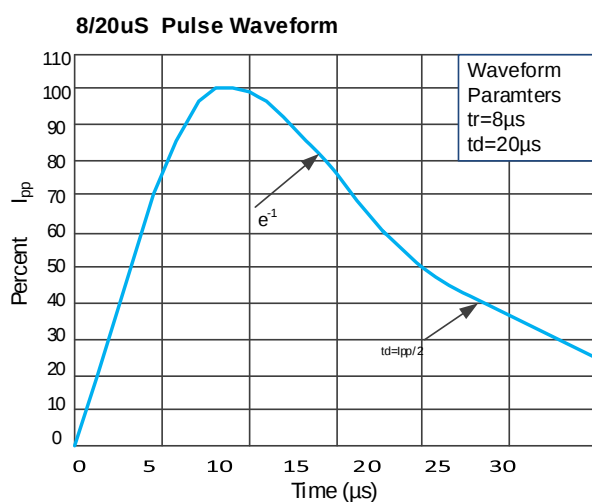
Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

1. All parameters specified at  $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise noted.
2. These parameters are guaranteed by design and characterization.
3. Standard IEC 61000-4-2 with  $C_{Discharge} = 150\text{ pF}$ ,  $R_{Discharge} = 330\text{ }\Omega$

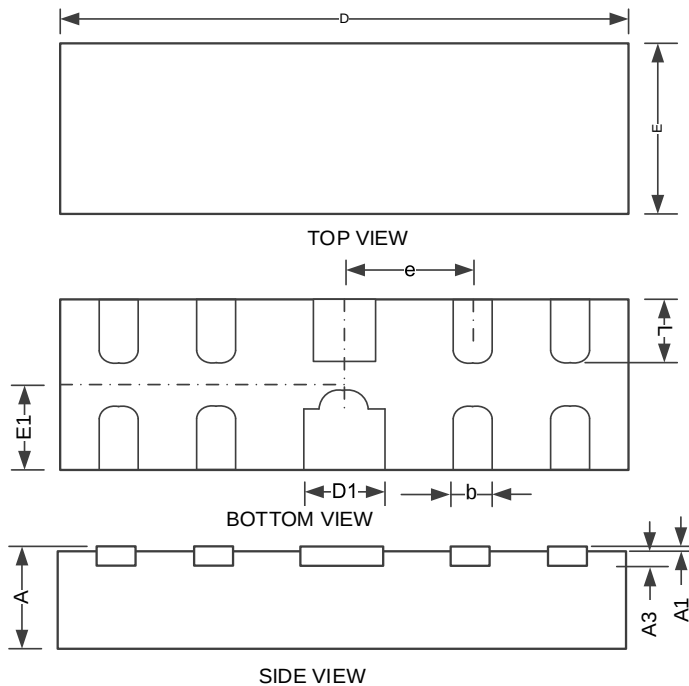
## Electrical Parameters at $T_A = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified



## Typical Characteristics at $T_A = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

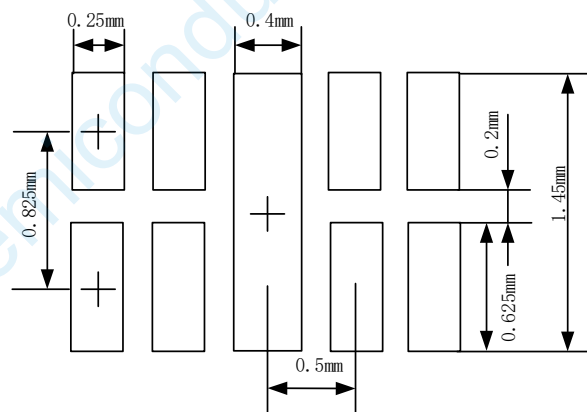


## Package Information



| COMMON DIMENSION (MM) |             |       |       |
|-----------------------|-------------|-------|-------|
| PKG                   | DFN2510-10L |       |       |
| REF.                  | MIN.        | NOM.  | MAX.  |
| A                     | 0.500       | -     | 0.600 |
| A1                    | 0.000       | -     | 0.050 |
| A3                    | 0.150REF.   |       |       |
| D                     | 2.450       | 2.500 | 2.550 |
| E                     | 0.950       | 1.000 | 1.050 |
| D1                    | 0.350       | 0.400 | 0.450 |
| E1                    | 0.450       | 0.510 | 0.560 |
| b                     | 0.150       | 0.200 | 0.250 |
| L                     | 0.330       | 0.380 | 0.430 |
| e                     | 0.500       |       |       |

## Recommend PCB Layout



Notes: This Pcb Layout Is For Reference Purposes Only

## Marking

A524

## Ordering Information

| Part number | Material | Type | Reel size | MOQ     | MOQ/internal box | MOQ/carton         |
|-------------|----------|------|-----------|---------|------------------|--------------------|
| OV608A1-A   | GREEN    | T/R  | 7 inch    | 3k/reel | 10reel= 30k/box  | 4boxes=120k/carton |