Surface Mount Transient Voltage Suppressor Diode Array

Features

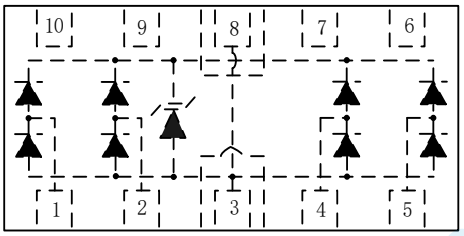
- ESD protection of four I/O lines
- Solid-state silicon-avalanche technology
- Working Voltage: 5.0V
- Peak Power up to 40 Watts @ 8 x 20μs Pulse
- Low Leakage current
- Response Time is Typically < 1 ns
- IEC 61000-4-2 (ESD) ±25kV (air), ±25kV (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)

Applications

- Cellular Handsets & Accessories
- Portable devices
- Display Port interface
- HDMI

Mechanical Data

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



Circuit Diagram



DFN2510-10L

Absolute Maximum Rating at T_A = 25 °C, unless otherwise specified

Rating	Symbol	Value	Units
Peak Pulse Power (t_p =8/20μs)	P_{PP}	40	Watts
Peak Pulse Current (t_p =8/20μs) (note1)	I_{pp}	4	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	±25 ±25	kV
Lead Soldering Temperature	T_L	260(10seconds)	℃
Junction Temperature	T_J	-55 to + 125	℃
Storage Temperature	T_{stg}	-55 to + 150	℃

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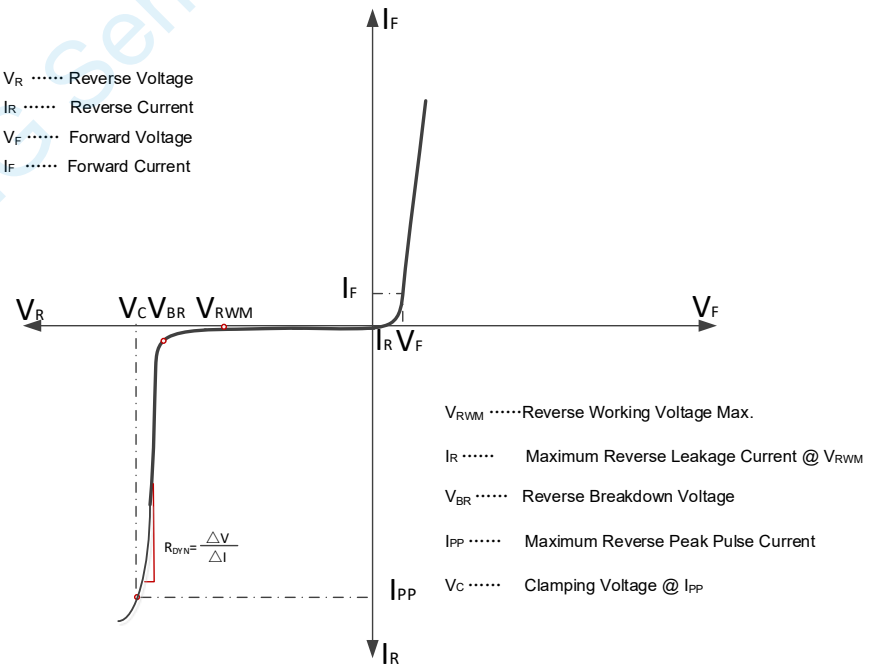
Electrical Characteristics at T_A = 25 °C, unless otherwise specified

Parameter	Symbol	Conditions		Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}					5.0	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA		6.0			V
Reverse Leakage Current	I_R	V_{RWM}=5.0V, T=25℃				1.0	μA
Peak Pulse Current	I_{PP}	tp =8/20μs				4.0	A
Clamping Voltage	V_C	I_{PP}=1A, tp=8/20μs			7.5		V
Clamping Voltage	V_C	I_{PP}=4A, tp=8/20μs			10.0		V
ESD Clamping Voltage	V_C	tp=0.2/100ns,I_{TLP}=4A			9.8		V
ESD Clamping Voltage	V_C	tp=0.2/100ns,I_{TLP}=16A			13.5		V
Dynamic Resistance	R_{DYN}	tp=0.2/100ns			0.308		Ω
Junction Capacitance	C_J	V_R = 0V, f = 1MHz	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°C unless otherwise noted.
2. These parameters are guaranteed by design and characterization.
3. Standard IEC 61000−4−2 with $C_{Discharge}$ = 150 pF, $R_{Discharge}$ = 330 Ω

Electrical Parameters at T_A = 25 °C, unless otherwise specified



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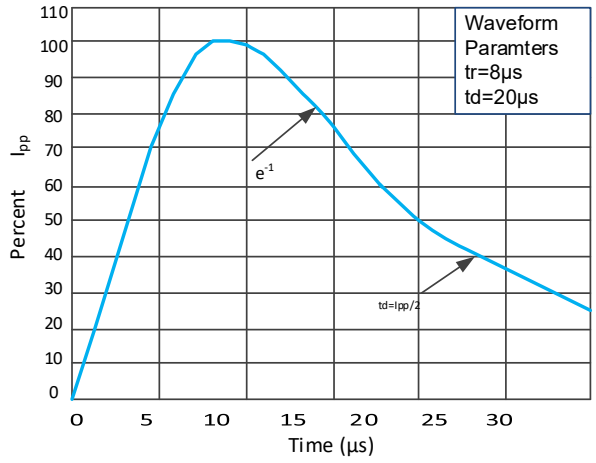
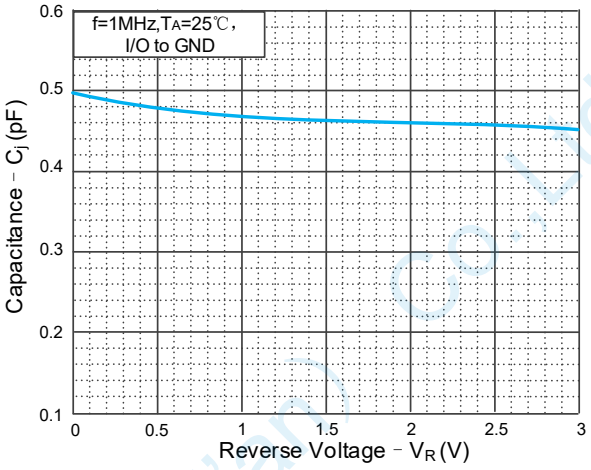
Typical Characteristics at T_A = 25 °C, unless otherwise specified

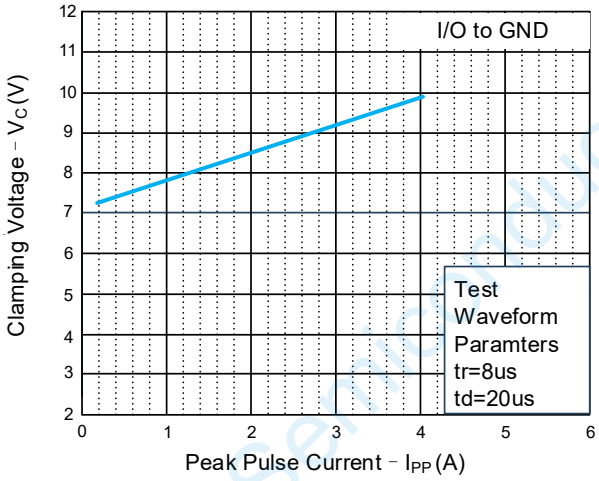
8/20uS Pulse Waveform



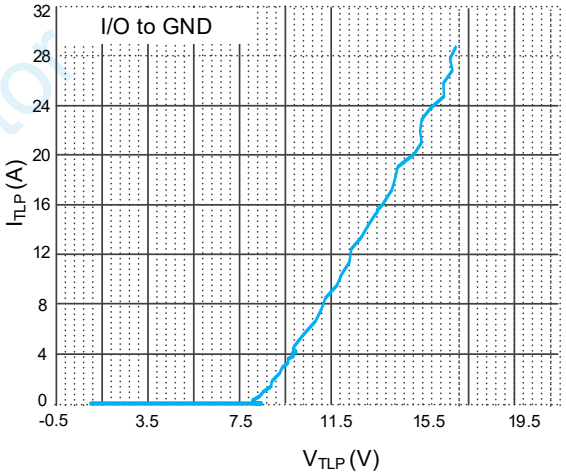
Capacitance vs. Reverse Voltage



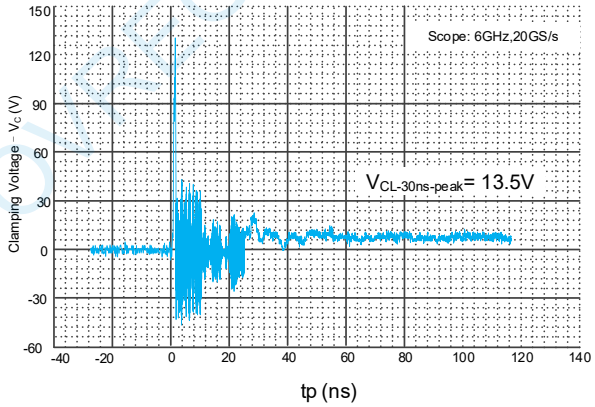
Reverse Clamping Voltage vs. Peak Pulse Current



TLP Measurement



IEC61000-4-2 :15 kV positive pulse from I/O to GND



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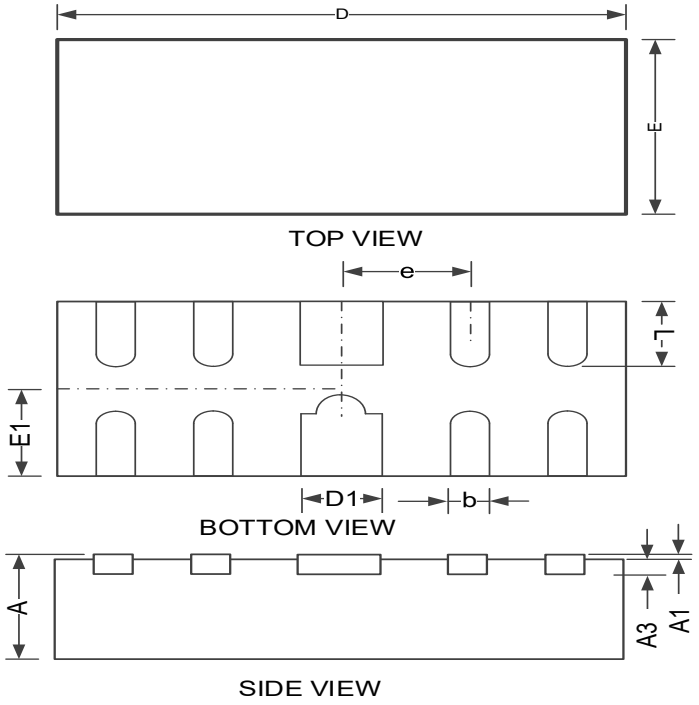
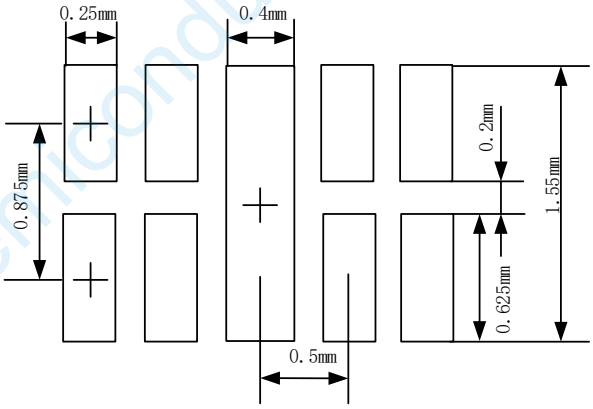
Package Information



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

5UE

Ordering Information

Part number	Material	Type	Reel size	MOQ	MOQ/internal box	MOQ/carton
OVEL608A2	GREEN	T/R	7 inch	3k/reel	10reel= 30k/box	4boxes=120k/carton