Surface Mount Transient Voltage Suppressor Diode

Features

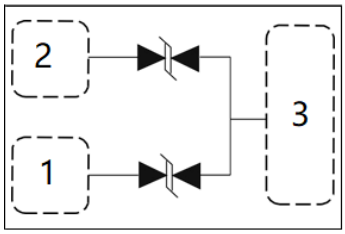
- ✧ Bi-directional ESD protection of two lines
- ✧ Solid-state silicon-avalanche technology
- ✧ Working Voltage: 5.0V
- ✧ Peak Power up to 60 Watts @ 8 x 20μs Pulse
- ✧ Low Leakage current
- ✧ Response Time is Typically < 1 ns
- ✧ IEC 61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- ✧ IEC 61000-4-4 (EFT) 40A (5/50ns)

Applications

- ✧ Cellular Handsets & Accessories
- ✧ Portable devices
- ✧ Digital cameras
- ✧ Power supplies

Mechanical Data

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



Circuit Diagram



DFN1006-3L

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

Rating	Symbol	Value	Units
Peak Pulse Power (t_p =8/20μs)	P_{PP}	60	Watts
Peak Pulse Current (t_p =8/20μs) (note1)	I_{pp}	6	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	±30 ±30	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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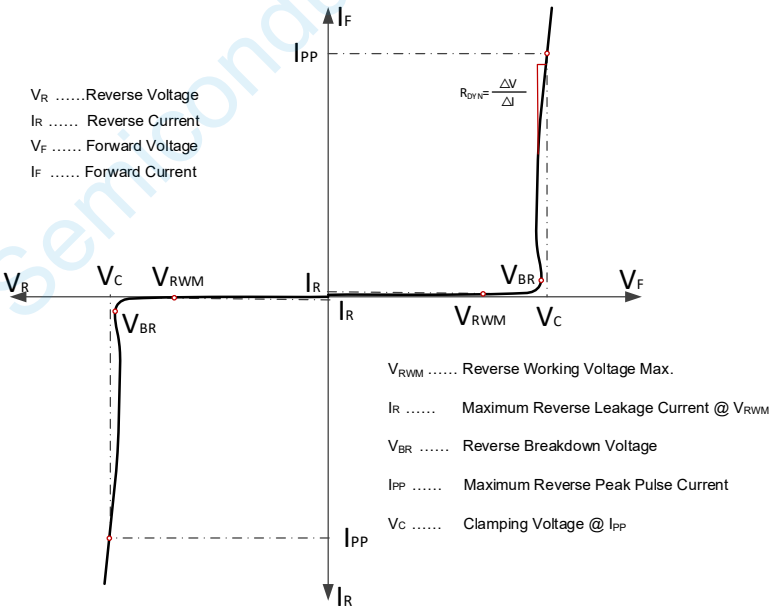
Electrical Characteristics at T_A = 25 °C, unless otherwise specified

Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	5.5		8.0	V
Reverse Leakage Current	I_R	V_{RWM}=5.0V, T=25℃			200	nA
Peak Pulse Current	I_{PP}	tp =8/20μs			6	A
Clamping Voltage	V_C	I_{PP}=1A, tp=8/20μs		6.5	7.0	V
Clamping Voltage	V_C	I_{PP}=6A, tp=8/20μs		8.5	10	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHz pin1/pin2-pin3		10	15	pF
		V_R = 0V, f = 1MHz pin1-pin2		6	8	pF

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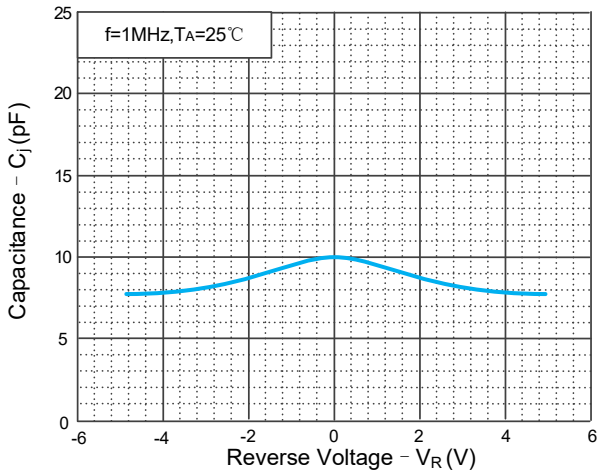
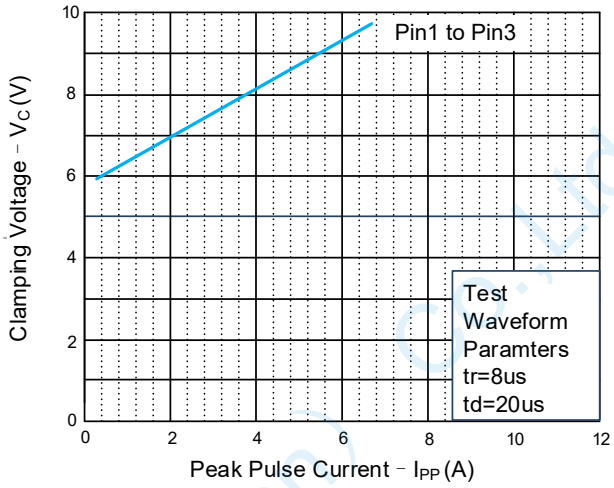
Typical Characteristics at T_A = 25 °C, unless otherwise specified

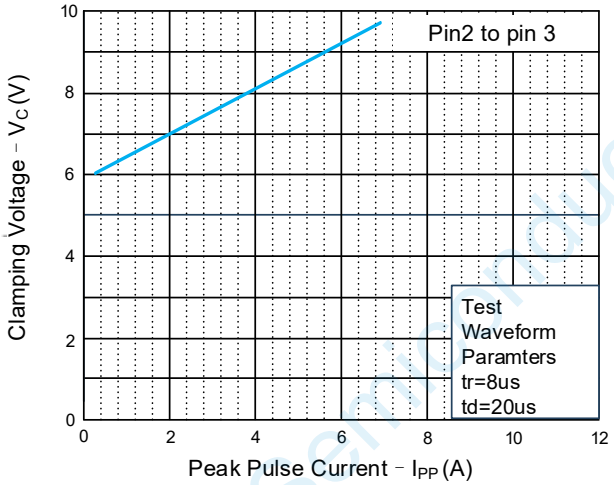
Capacitance vs. Reverse Voltage



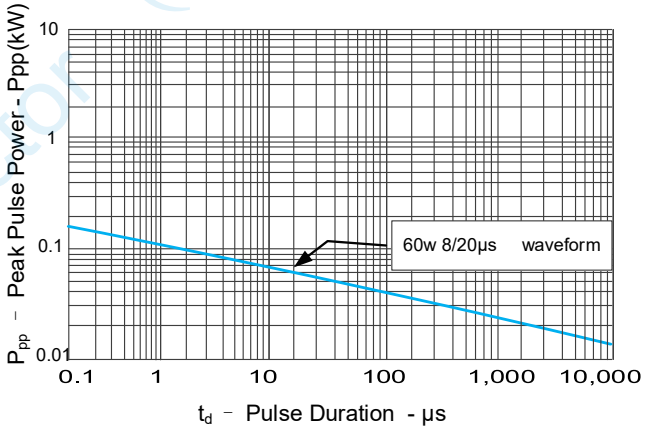
Reverse Clamping Voltage vs. Peak Pulse Current



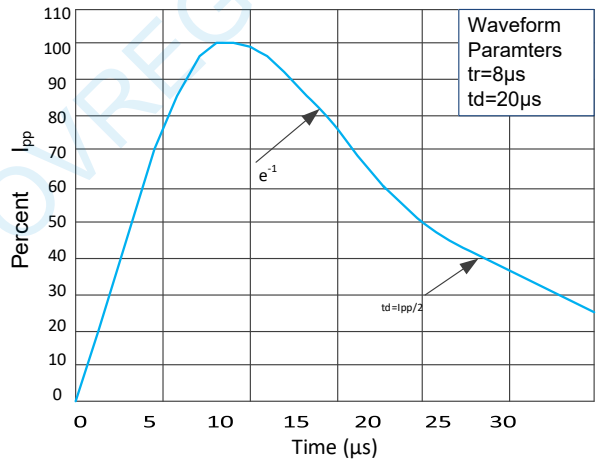
Forward Clamping Voltage vs. peak PulseCurrent



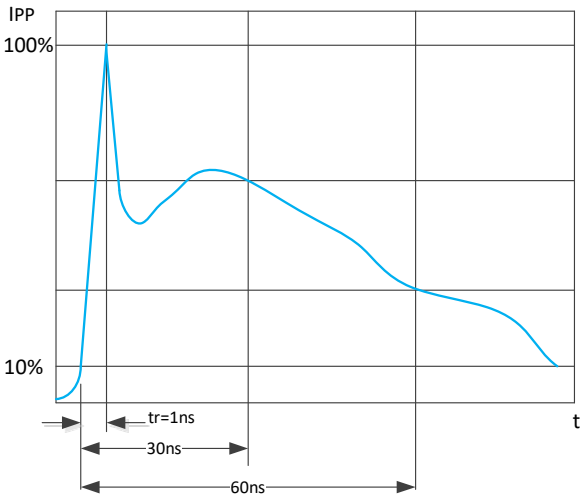
Non-repetitive Peak Pulse Power vs. Pulse Time



8/20uS Pulse Waveform



IEC61000-4-2 +8kV Pulse Waveform



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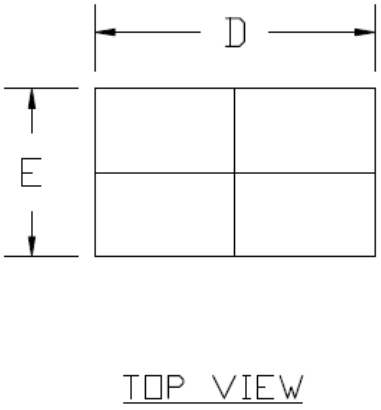
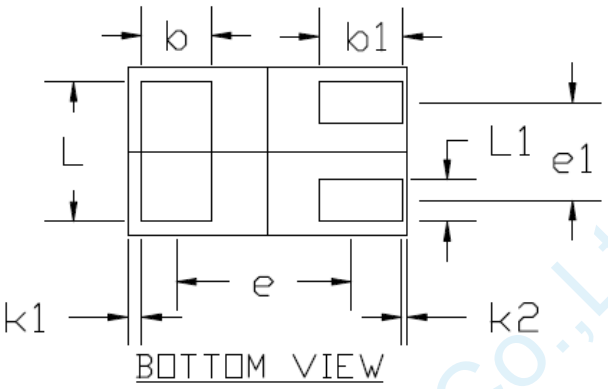
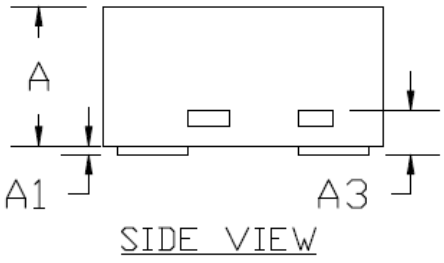
Package information

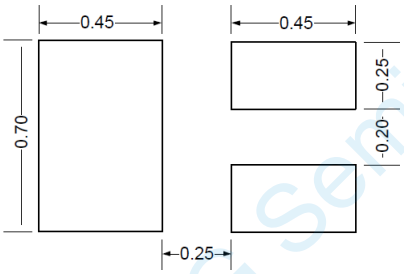






DIMENSION In Millimeters (MM)			
PKG	DFN1006-3L		
REF.	Min.	Nom.	Max.
A	>0.400	----	0.500
A1	0.00	----	0.050
A3	0.127 REF		
D	0.950	1.000	1.050
E	0.550	0.600	0.650
b	0.200	0.250	0.300
b1	0.200	0.300	0.400
L	0.450	0.500	0.550
L1	0.100	0.150	0.200
e	0.675 REF		
e1	0.350 REF		
k1	0.025	0.050	0.075
k2	0.005	----	0.040

Recommend PCB Layout



Notes: This PCB Layout Is For Reference Purposes Only

Marking

V5

Ordering Information

Part number	Material	Type	Reel size	MOQ	MOQ/internal box	MOQ/carton
OVE2205A1G	GREEN	T/R	7 inch	12k/reel	10reel= 120k/box	4boxes=480k/carton

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