Surface Mount Transient Voltage Suppressor Diode

Features

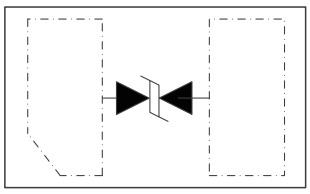
- ✧ Bi-directional protection of one power line
- ✧ Solid-state silicon-avalanche technology
- ✧ Working Voltage: 6.5V
- ✧ Peak Power up to 2700 Watts @ 8 x 20μs Pulse
- ✧ Low Leakage current
- ✧ Response Time is Typically < 1 ns
- ✧ IEC 61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- ✧ IEC 61000-4-4 (EFT) 60A (5/50ns)

Applications

- ✧ Power management
- ✧ Power supplies

Mechanical Data

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



Circuit Diagram



DFN1610

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

Rating	Symbol	Value	Units
Peak Pulse Power (t_p =8/20μs)	P_{PP}	2700	Watts
Peak Pulse Current (t_p =8/20μs) (note1)	I_{pp}	150	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	℃

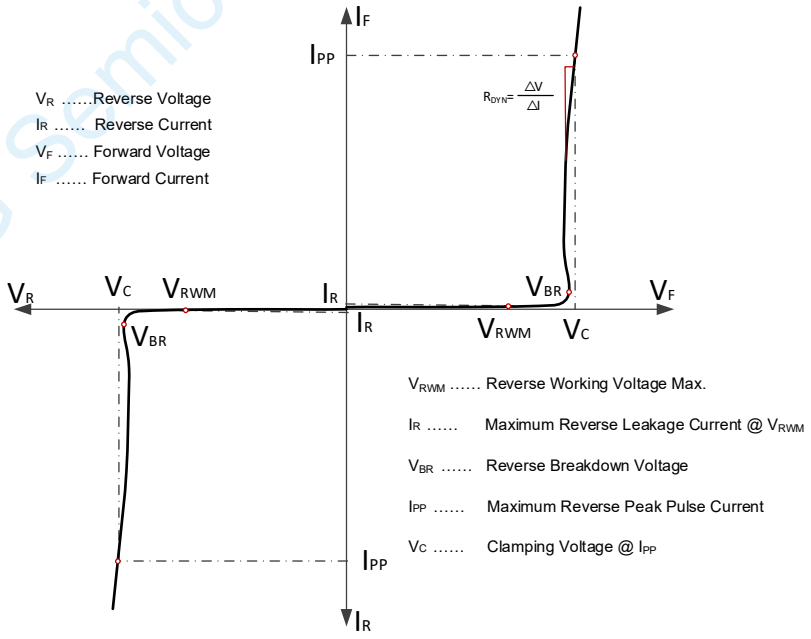
OVREG Semiconductor (xi'an) Co.,Ltd.

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

Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}				6.5	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	7.0			V
Reverse Leakage Current	I_R	V_{RWM}=6.5V, T=25℃			1.0	μA
Peak Pulse Current	I_{PP}	tp =8/20μs			150	A
Clamping Voltage	V_C	I_{PP}=40A, tp=8/20μs		9.8		V
Clamping Voltage	V_C	I_{PP}=80A, tp=8/20μs		12.8		V
Clamping Voltage	V_C	I_{PP}=120A, tp=8/20μs		15.5		V
Clamping Voltage	V_C	I_{PP}=150A, tp=8/20μs		18		V
Junction Capacitance	C_J	V_R = 0V, f = 1MHz		550		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

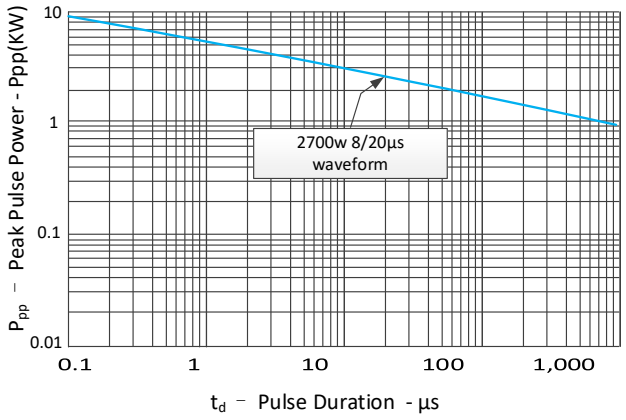
Electrical Parameters at T_A = 25 °C, unless otherwise specified



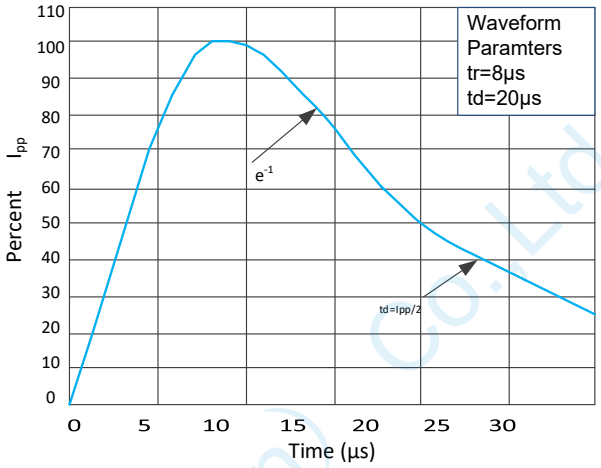
OVREG Semiconductor (xi'an) Co.,Ltd.

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

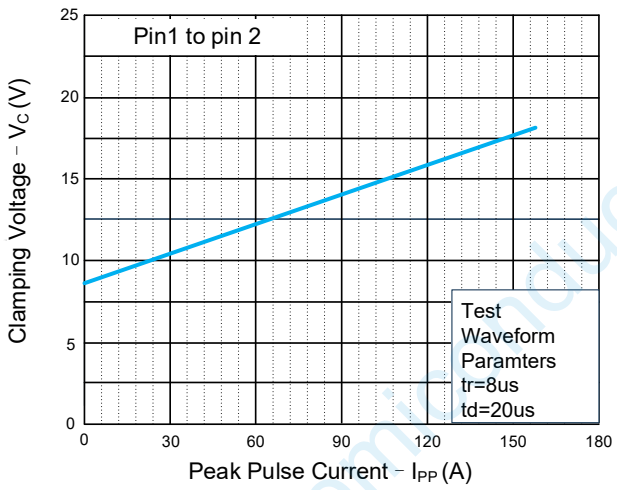
Peak Pulse Power vs. Pulse Time



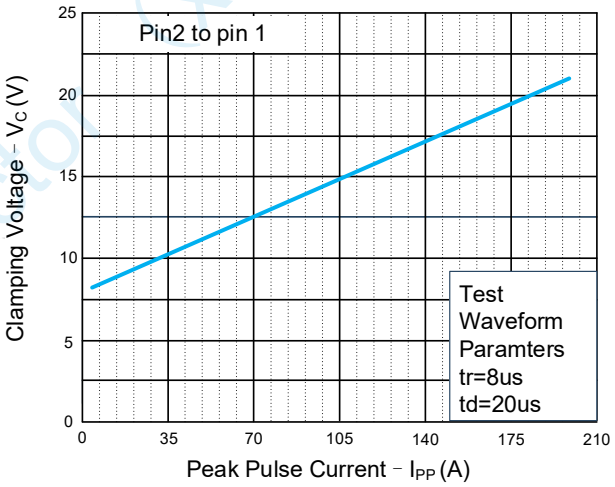
8/20uS Pulse Waveform



Forward Clamping Voltage vs. peak PulseCurrent

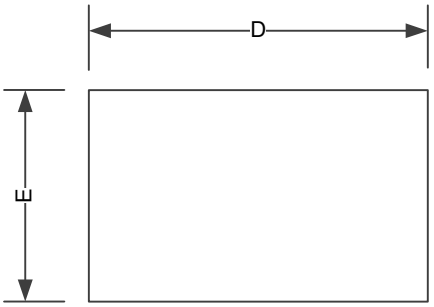


Reverse Clamping Voltage vs. Peak Pulse Current

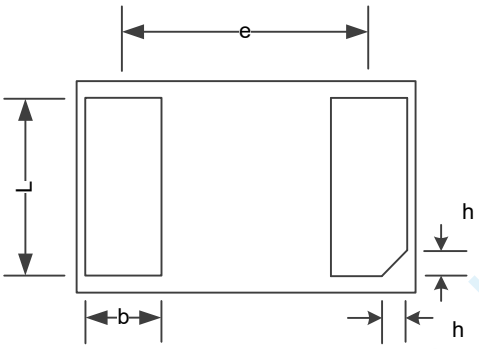


OVREG Semiconductor (Xi'an) Co.,Ltd.

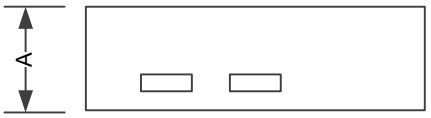
Package Information



TOP VIEW



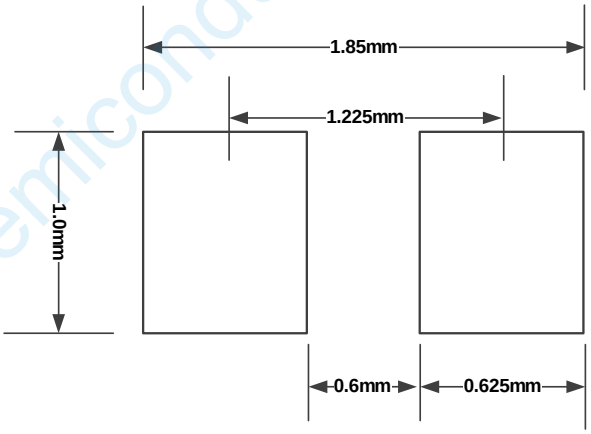
BOTTOM VIEW



SIDE VIEW

COMMON DIMENSION (mm)			
PKG	DFN1610		
REF	MIN.	NOM.	MAX.
A	0.45	0.50	0.55
D	1.55	1.60	1.65
E	0.95	1.00	1.05
b	0.35	0.40	0.45
L	0.75	0.80	0.85
e	1.10BSC		
h	0.15	0.20	0.25

Recommend PCB Layout



Notes: This PCB Layout Is For Reference Purposes Only

Marking



Ordering Information

Part number	Material	Type	Reel size	MOQ	MOQ/internal box	MOQ/carton
OVE66E92S1M	GREEN	T/R	7 inch	10k/reel	10reel= 100k/box	4boxes=400k/carton

OVREG Semiconductor (xi'an) Co.,Ltd.