

### Features

- 6000W peak pulse power (8/20)
- Low leakage: nA level
- Low operating voltage: 4.5V
- Ultra low clamping voltage
- One power line protects
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test  
Air discharge:  $\pm 30\text{kV}$   
Contact discharge:  $\pm 30\text{kV}$
  - IEC61000-4-4 (EFT) 80A (5/50ns)
  - IEC61000-4-5 (Lightning) 250A (8/20 $\mu\text{s}$ )
- RoHS Compliant

### Applications

- Power Management
- Industrial Application
- Power Supply Protection

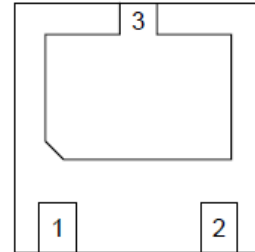
### Mechanical Characteristics

- Package: DFN2020-3
- Lead Finish: NiPdAu
- Case Material: “Green” Molding Compound
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below
- Marking Information: See Below

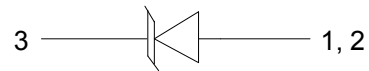
### Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 $\mu\text{s}$ )	Ppp	5500	W
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	$\pm 30$	Kv
ESD per IEC 61000-4-2 (Contact)		$\pm 30$	
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>STJ</sub>	-55 to +150	°C

### Dimensions DFN2020-3



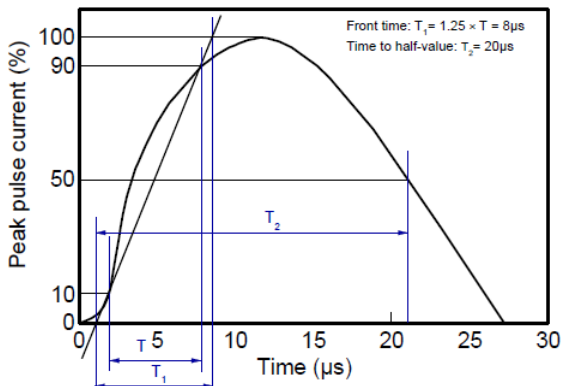
### Pin Configuration



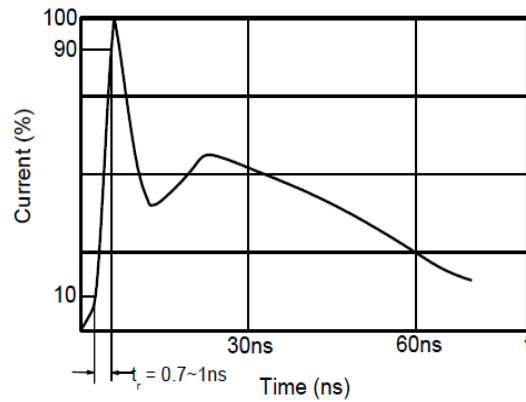
## Electrical Characteristics (TA=25°C unless otherwise specified)

Part Number	Device Marking	V <sub>RWM</sub> (V)	V <sub>BR</sub> (V)	I <sub>T</sub> (mA)	V <sub>C</sub> @50A	V <sub>C</sub>		I <sub>R</sub> μA (Max)	C (Pf) (Typ.)
						(Max)	(@A)		
SD4501P4-3	G61	4.5	5	1	10	20	250	1	2800

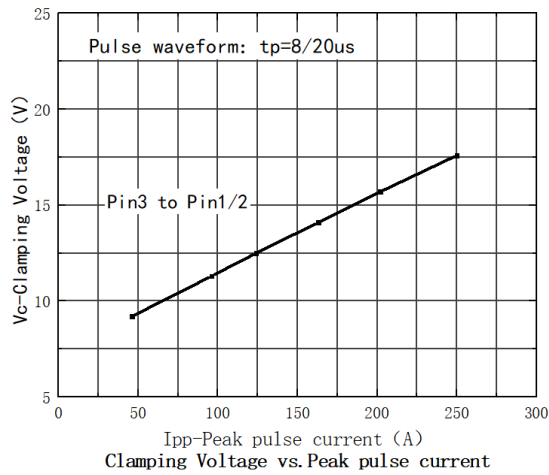
## Typical Performance Characteristics ( $T_A=25^\circ\text{C}$ unless otherwise Specified)



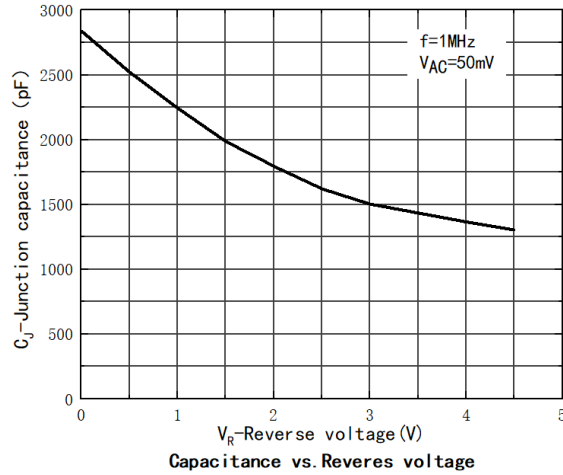
8/20 $\mu\text{s}$  waveform per IEC61000-4-5



Contact discharge current waveform per IEC61000-4-2



Clamping Voltage vs. Peak pulse current



Capacitance vs. Reverse voltage

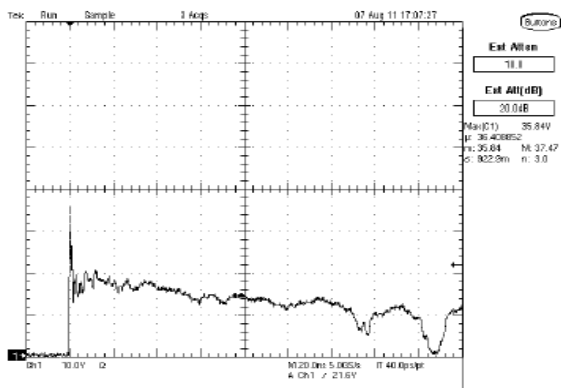


Fig1. ESD Clamping Voltage Screenshot Positive 8 kV Contact per IEC61000-4-2

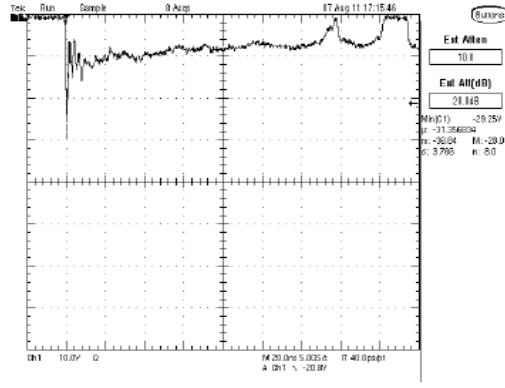
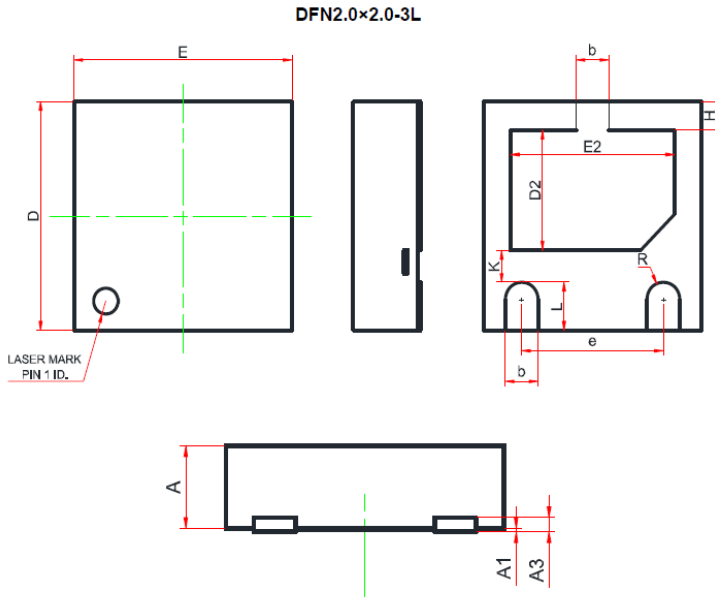


Fig2. ESD Clamping Voltage Screenshot Negative 8 kV Contact per IEC61000-4-2

DFN2020-3 Package Outline Drawing



Symbol	Dimensions In Millimeters		
	Min.	Typ.	Max.
A	0.51	0.55	0.60
A1	0.00	0.02	0.05
A3	0.15 REF.		
b	0.25	0.30	0.35
D	1.90	2.00	2.10
E	1.90	2.00	2.10
D2	0.85	1.00	1.10
E2	1.35	1.50	1.60
e	1.20	1.30	1.40
H	0.20	0.25	0.30
K	0.20	0.30	0.40
L	0.35	0.40	0.45
R	0.15	-	-