

Features

- 5400W peak pulse power (8/20)
- Low leakage: nA level
- Low operating voltage: 24V
- 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) 120A (8/20 μs)
- RoHS Compliant

Applications

- Power Management
- Industrial Application
- Power Supply Protection

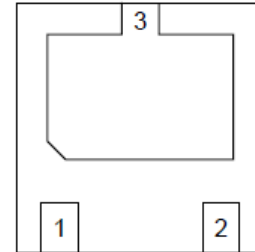
Mechanical Characteristics

- 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
- Device Marking: T24:003

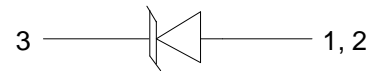
Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	Ppp	5400	W
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 30	Kv
ESD per IEC 61000-4-2 (Contact)		± 30	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{STJ}	-55 to +150	°C

Dimensions DFN2020-3



Pin Configuration



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

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
V _{RWM}	Reverse Working Voltage				24	V
V _{BR}	Reverse Breakdown Voltage	I _T =1mA	25			V
I _R	Reverse Leakage Current	V _{RWM} =24V			1.0	μA
V _F	Diode Forward Voltage	I _F =10mA			1.2	V
V _C	Clamping Voltage	I _{PP} =60A, t _p =8/20μs			40	V
		I _{PP} =120A, t _p =8/20μs			45	V
C _J	Junction Capacitance	V _R =0V, f=1MHz		800		pF

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

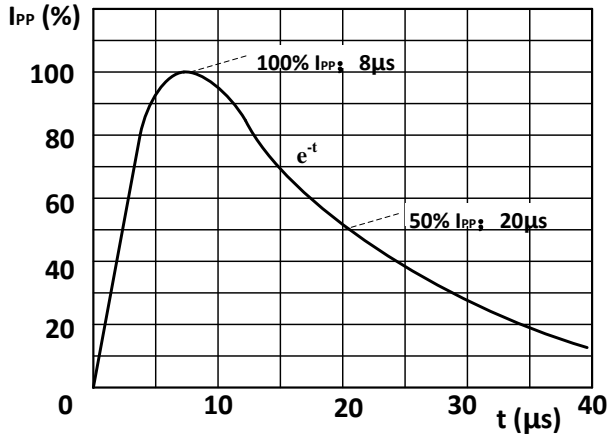


Fig. 1. 8/20 μs pulse waveform according to IEC 61000-4-5 and IEC 61643-321

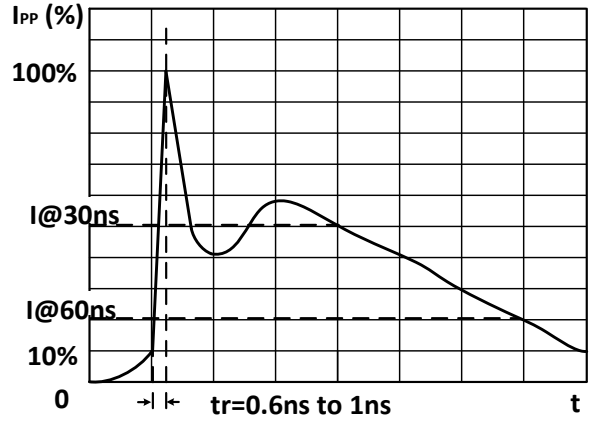


Fig. 2. ESD pulse waveform according to IEC 61000-4-2

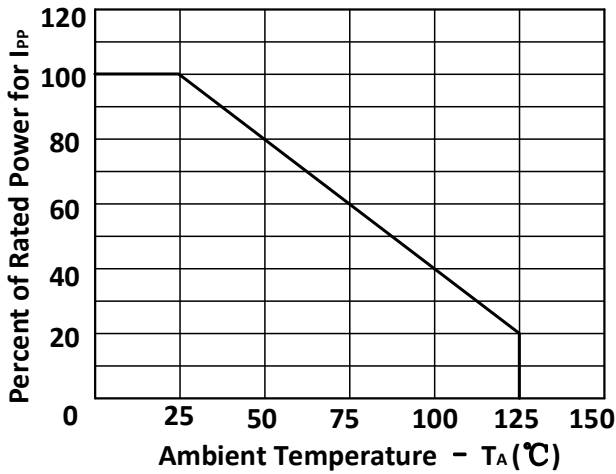


Fig. 3. Power Derating Curve

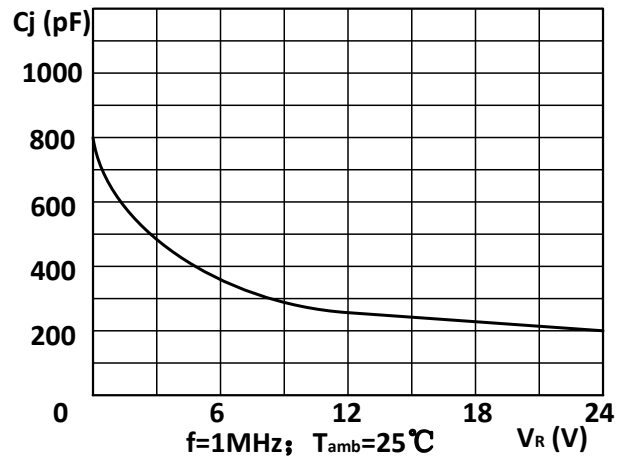
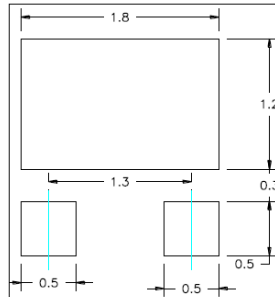
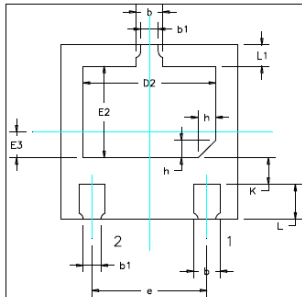
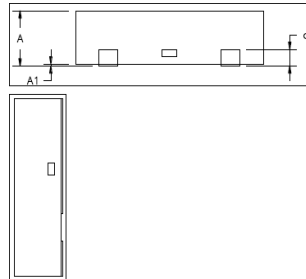
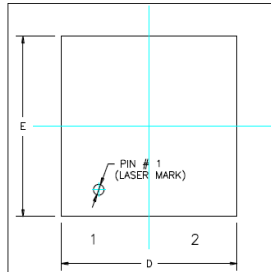


Fig. 4. Junction Capacitance vs V_R

DFN2020-3 Package Outline Drawing



Symbol	Millimeters		
	min	nom	max
A	0.50	0.55	0.60
A1	0.00	0.02	0.05
b	0.25	0.30	0.35
b1	0.2 REF		
c	0.152 REF		
D	1.90	2.00	2.10
D2	1.40	1.50	1.60
e	1.30 BSC		
E	1.90	2.00	2.10
E2	0.95	1.05	1.15
E3	0.20	0.30	0.40
L	0.35	0.40	0.45
L1	0.20	0.25	0.30
h	0.2 REF		
K	0.20	0.30	0.40

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