

Features

- 6000Watts peak pulse power ($t_p = 8/20\mu s$)
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Protection one power line
- IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 240A (8/20 μs)



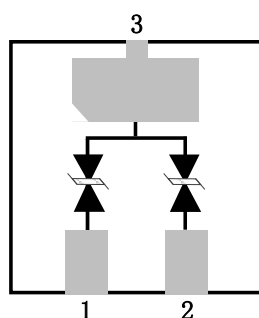
Applications

- USB Vbus,
- Power Line
- Power management

Mechanical Data

- DFN2 $\times$ 2-3L package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Schematic & PIN Configuration



DFN2 $\times$ 2-3L

Absolute Maximum Rating

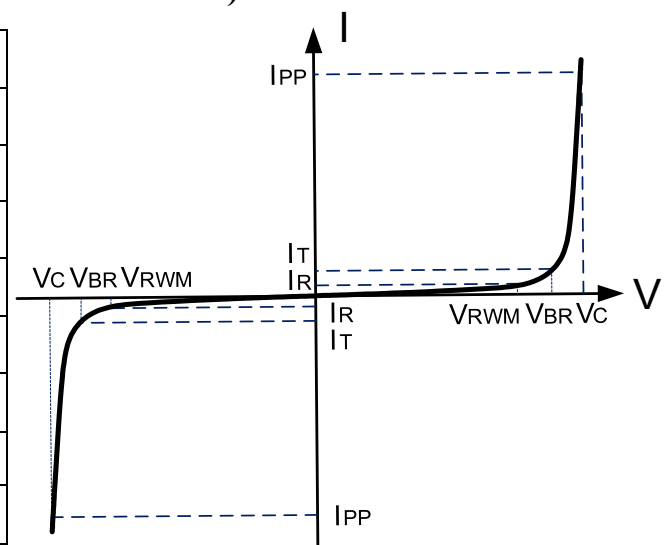
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PP}	6000	Watts
Peak Pulse Current ($t_p=8/20\mu s$) (note1)	I_{pp}	250	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Junction Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{stg}	-55 to + 125	°C

Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				4.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	4.8	5.4		V
Reverse Leakage Current	I_R	$V_{RWM}=4.3V, T=25^\circ C$			1	μA
Clamping Voltage	V_C	$I_{PP}=200A, t_p=8/20\mu$ (Pin3 to Pin1/Pin2)		14	18	V
		$I_{PP}=240A, t_p=8/20\mu s$ (Pin3 to Pin1+Pin2)		16	21	
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$ (Pin3 to Pin1/Pin2)		500		pF

Electrical Parameters (TA = 25°C unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current



Note:.. 8/20 μs pulse waveform.

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

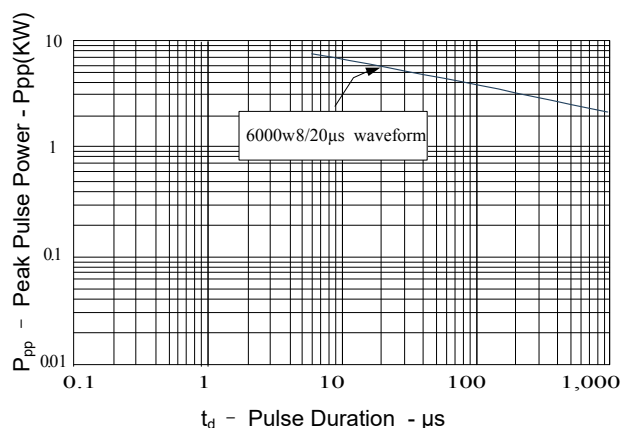


Figure 2: Power Derating Curve

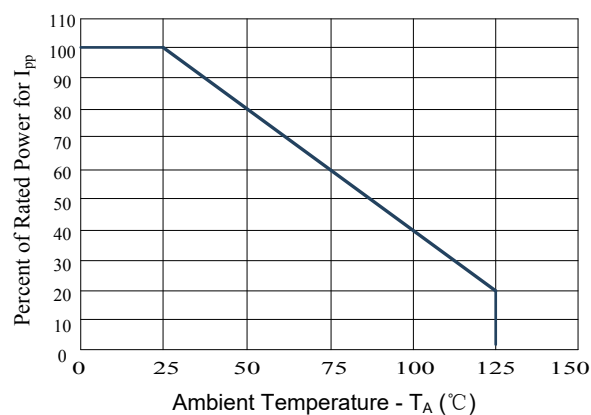


Figure3: Pulse Waveform

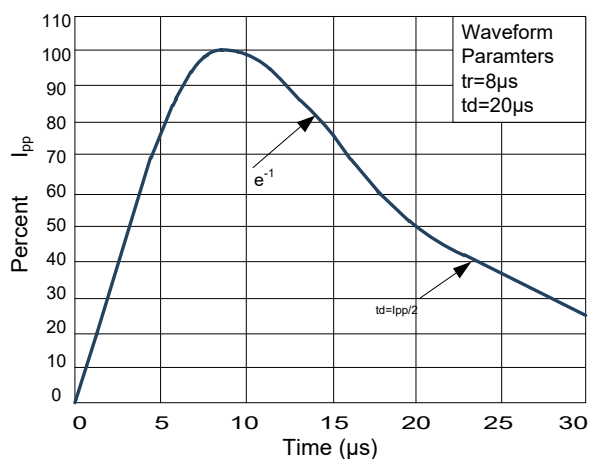
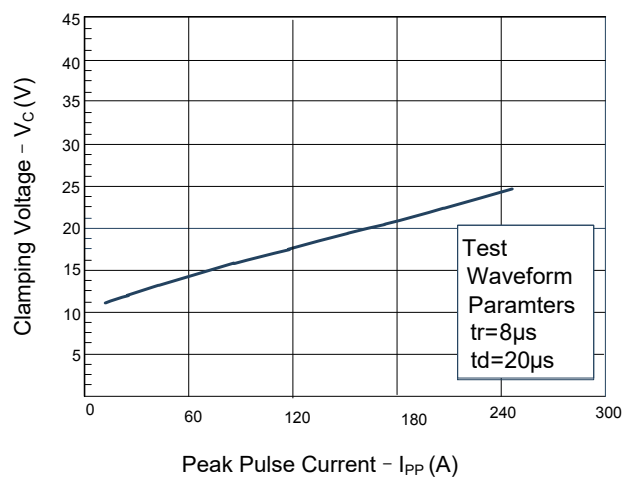
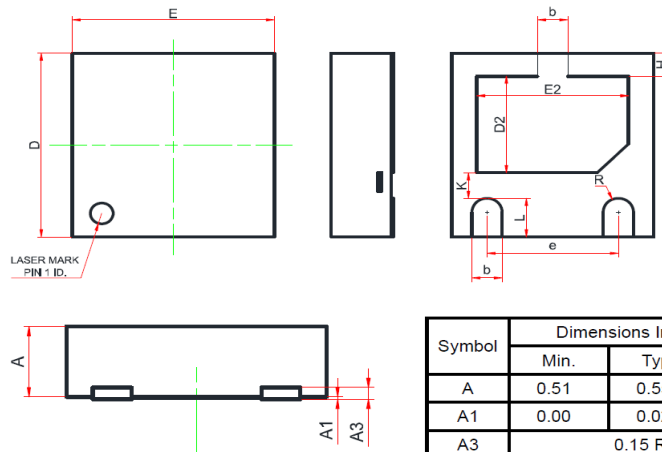


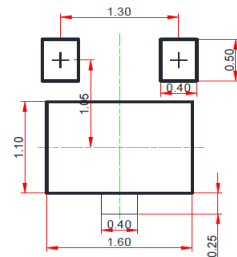
Figure 4: Clamping Voltage vs. I_pp



Outline Drawing – DFN2×2-3L



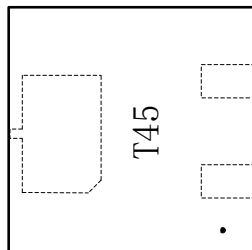
Recommend Land Pattern (Unit: mm)



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	-	-

Note:
This recommended land pattern is for reference purpose only.

Marking



Ordering information

Order code	Package	Base qty	Delivery mode
RL20203Q0431C	DFN2×2-3L	3000	Tape and reel