

### »Features

- 60Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Tiny DFN0603 package
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance ( $C_j=0.35pF$  typ.)
- Protection one data/power line
- IEC 61000-4-2  $\pm 15kV$  contact  $\pm 20kV$  air
- IEC 61000-4-4 (EFT) 40A(5/50ns)
- IEC 61000-4-5 (Lightning) 3.5A(8/20 $\mu s$ )



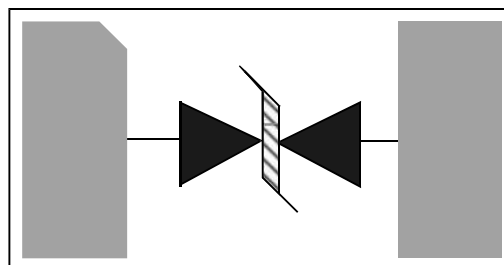
### »Applications

- USB3.0,HDMI2.0,Thunderbolt
- Notebooks, Desktops, and Servers
- Portable Instrumentation

### »Mechanical Data

- DFN0603package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

### »Schematic & PIN Configuration



**DFN0603**

»Absolute Maximum Rating

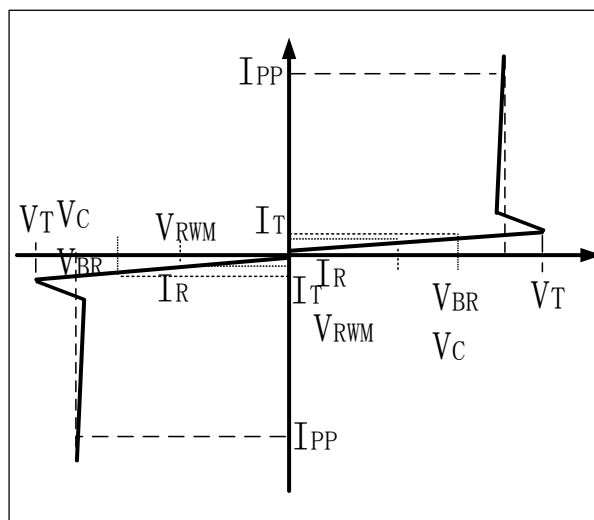
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p=8/20\mu s$ )	$P_{PP}$	60	Watts
Peak Pulse Current ( $t_p=8/20\mu s$ )(note1)	$I_{pp}$	3.5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$V_{ESD}$	20 15	kV
Lead Soldering Temperature	$T_L$	260(10seconds)	$^{\circ}C$
Junction Temperature	$T_J$	-55 to + 125	$^{\circ}C$
Storage Temperature	$T_{stg}$	-55 to + 125	$^{\circ}C$

»Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$				3.3	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	5.5	7.8		V
Reverse Leakage Current	$I_R$	$V_{RWM}=3.3V, T=25^{\circ}C$		50	100	nA
Peak Pulse Current	$I_{PP}$	$t_p=8/20\mu s$			3.5	A
Clamping Voltage	$V_C$	$I_{PP}=3.5A, t_p=8/20\mu s$		16	20	V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		0.35	0.50	pF

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

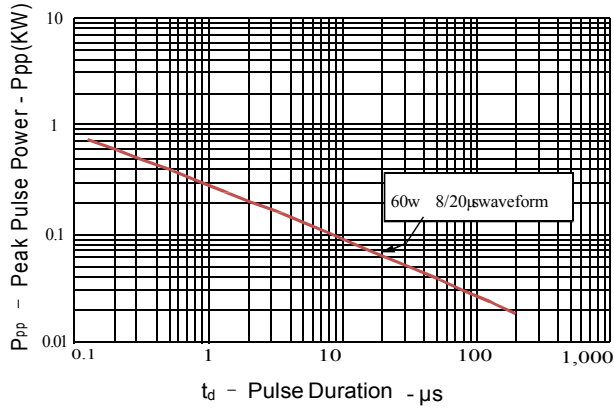
Symbol	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current



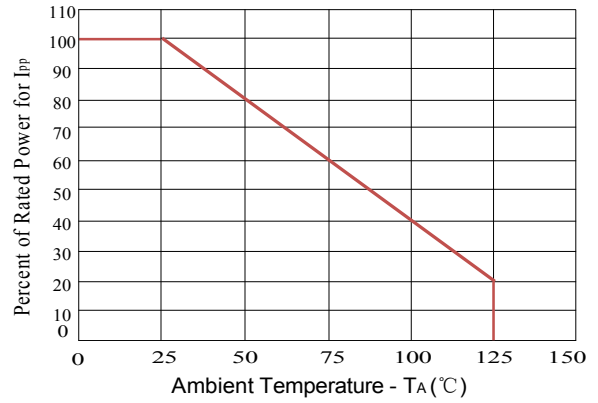
Note: 8/20μs pulse waveform.

»Typical Characteristics

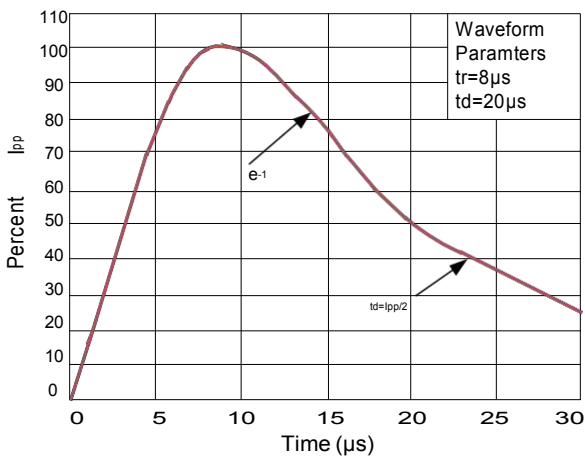
**Figure 1: Peak Pulse Power vs. Pulse Time**



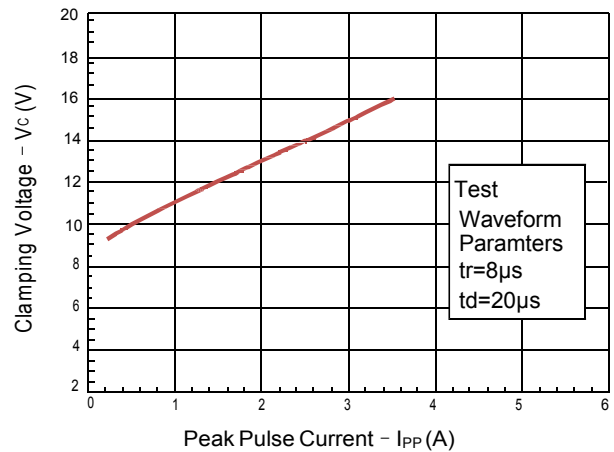
**Figure 2: Power Derating Curve**



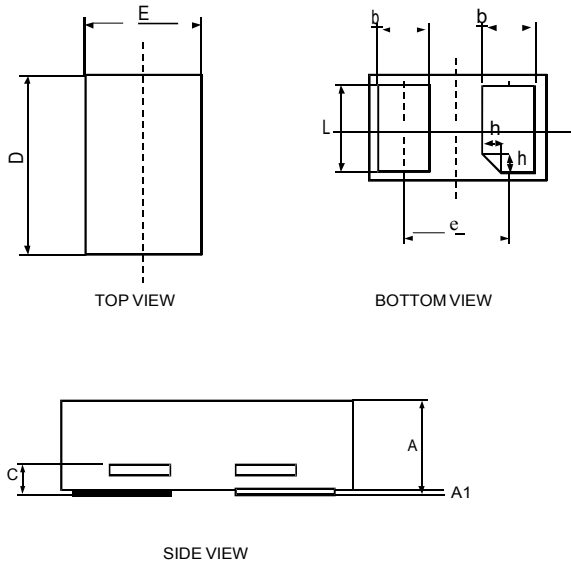
**Figure3: Pulse Waveform**



**Figure 4: Clamping Voltage vs. Ipp**

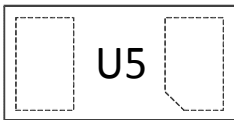


»Outline Drawing – DFN0603



Symbol	Dimensions in millimeters		
	Min	Nom	Max
A	0.28	0.30	0.32
A1	0.00	0.02	0.05
C	0.05	0.10	0.15
D	0.55	0.60	0.65
E	0.25	0.30	0.35
b	0.14	0.19	0.24
L	0.20	0.25	0.30
h	0	0.05	0.10

»Marking



»Ordering information

Order code	Package	Base qty	Deliverymode
ESD150-B1-W0201-N	DFN0603	10k	Tape and reel

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