

## Features

- Ultra small package: 0.6x0.3x0.3mm
- Ultra low capacitance: 0.35pF typical
- Ultra low leakage: nA level
- Low clamping voltage
- 2-pin leadless package
- RoHS compliant



## IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD)  $\pm 30\text{kV}$  (air),  $\pm 30\text{kV}$  (contact)
- IEC 61000-4-5 (Lightning) 4A (8/20us)

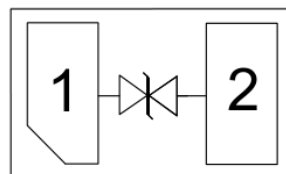
## Mechanical Characteristics

- Package: DFN0603-2
- Molding compound flammability rating: UL 94V-0
- Marking: Marking Code
- Packaging: Tape and Reel
- RoHS/WEEE Compliant
- MSD Level: 2

## Applications

- USB 2.0 and USB 3.0
- HDMI 1.3, HDMI 1.4 and HDMI 2.0
- SATA and eSATA interface
- DVI
- IEEE 1394
- Portable Electronics and Notebooks

## Schematic and PIN Configuration



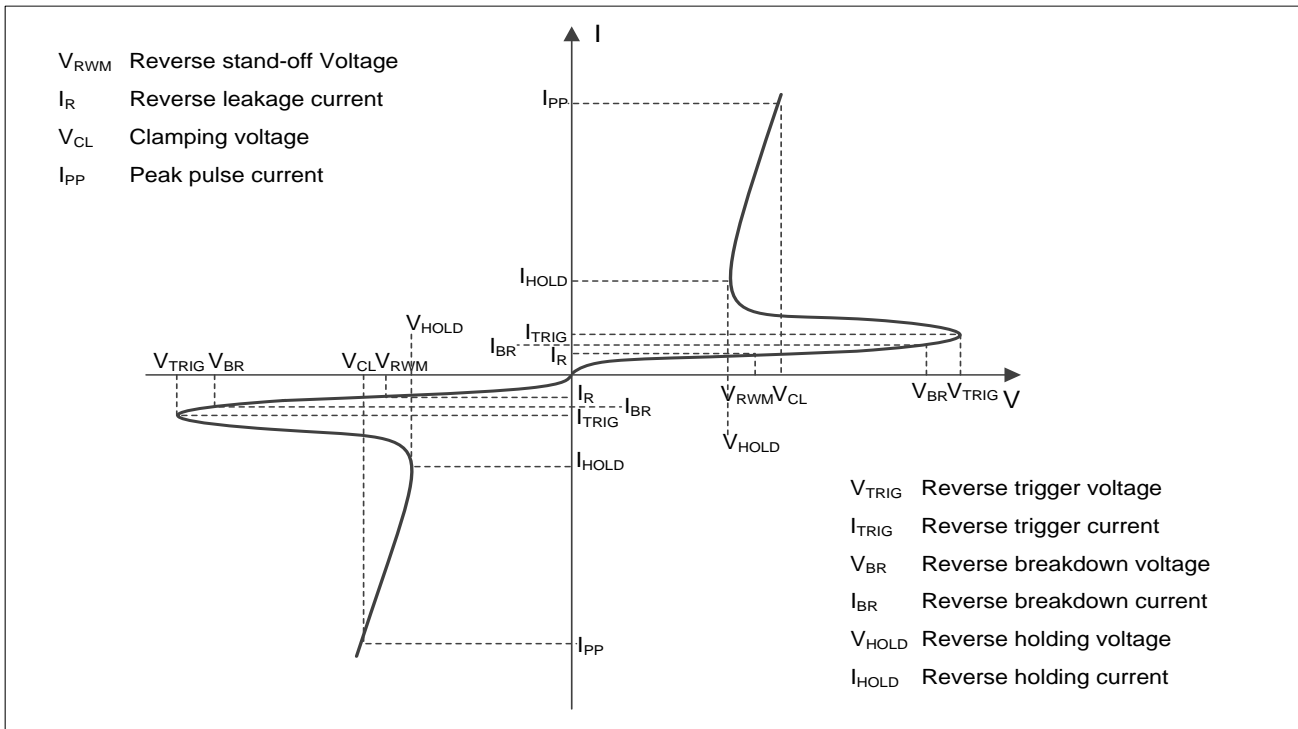
**Absolute Maximum Ratings (TA=25°C unless otherwise specified)**

Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	34	W
Peak Pulse Current ( $t_p = 8/20\mu s$ )	$I_{pp}$	4	A
ESD per IEC 61000-4-2(Air)	$V_{ESD}$	$\pm 30$	kV
ESD per IEC 61000-4-2(contact)		$\pm 30$	
Operating Temperature	$T_J$	-55 to +125	°C
Storage Temperature	$T_{STG}$	-55 to +150	°C

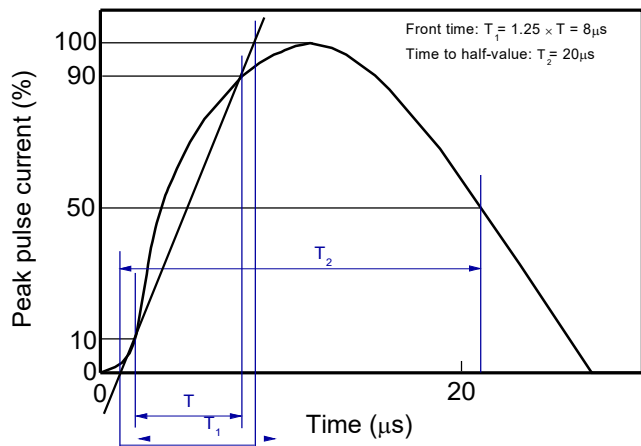
**Electrical Characteristics (TA=25°C unless otherwise specified)**

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$				3.3	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1mA$	7.0	10		V
Reverse Leakage Current	$I_R$	$V_{RWM} = 3.3V$			0.05	$\mu A$
Clamping Voltage	$V_C$	$I_{PP} = 1A, t_p = 8/20\mu s$		4.5	5.5	V
		$I_{PP} = 4A, t_p = 8/20\mu s$		7	8.5	V
Junction Capacitance	$C_j$	$V_R = 0V,$ $f = 1MHz$		0.35	0.5	pF

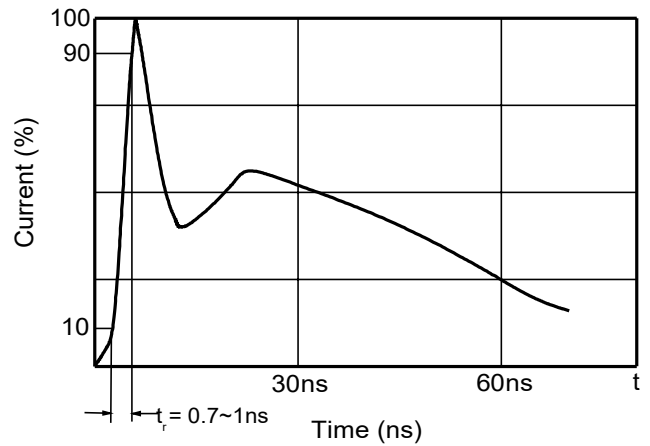
## Portion Electronics Parameter



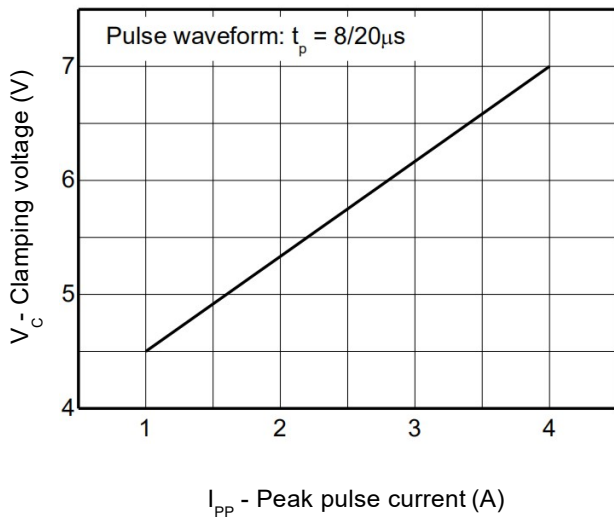
## Typical Characteristics (TA=25°C unless otherwise Specified)



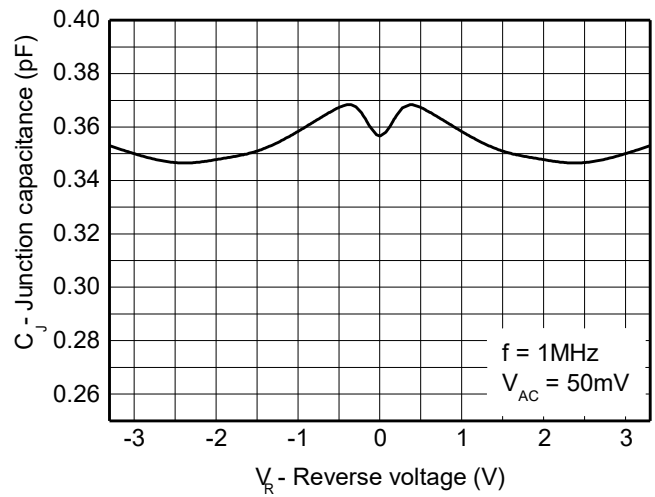
8/20μs waveform per IEC61000-4-5



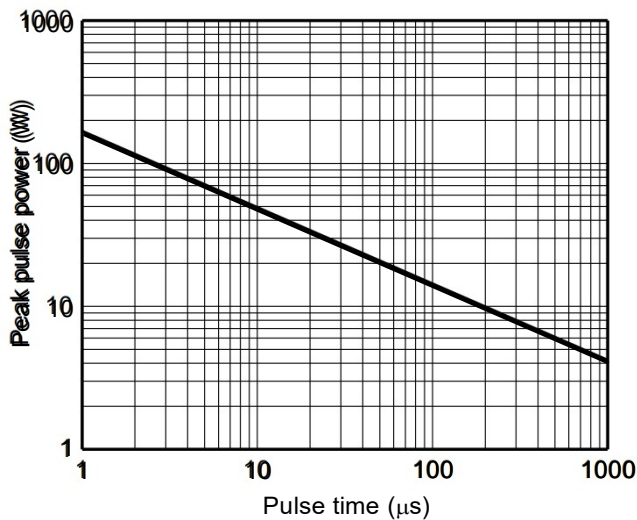
Contact discharge current waveform per IEC61000-4-2



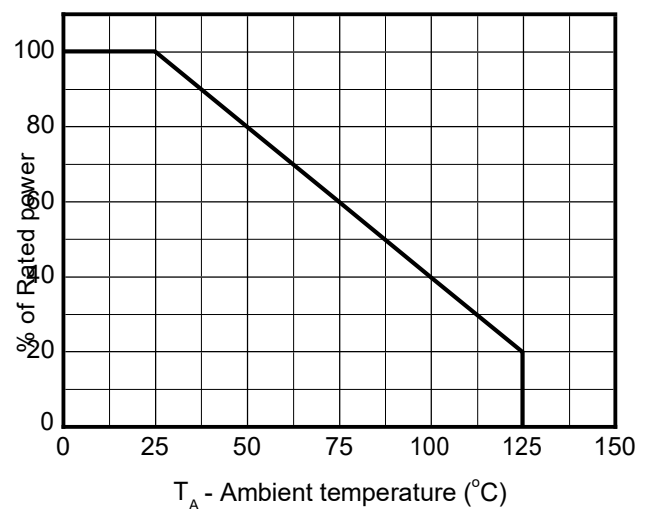
Clamping voltage vs. Peak pulse current



Capacitance vs. Reverse voltage

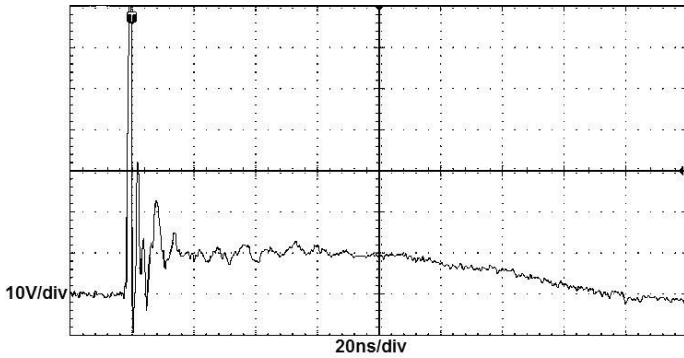


Non-repetitive peak pulse power vs. Pulse time

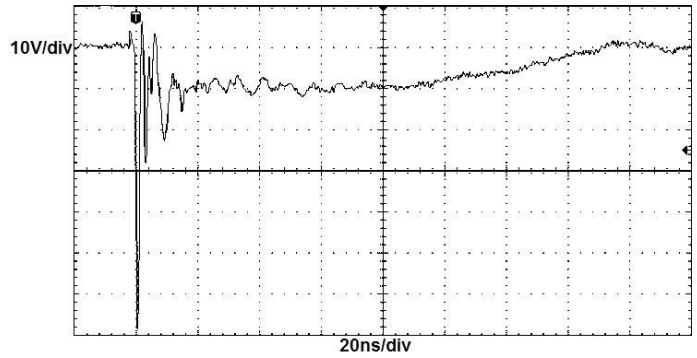


Power derating vs. Ambient temperature

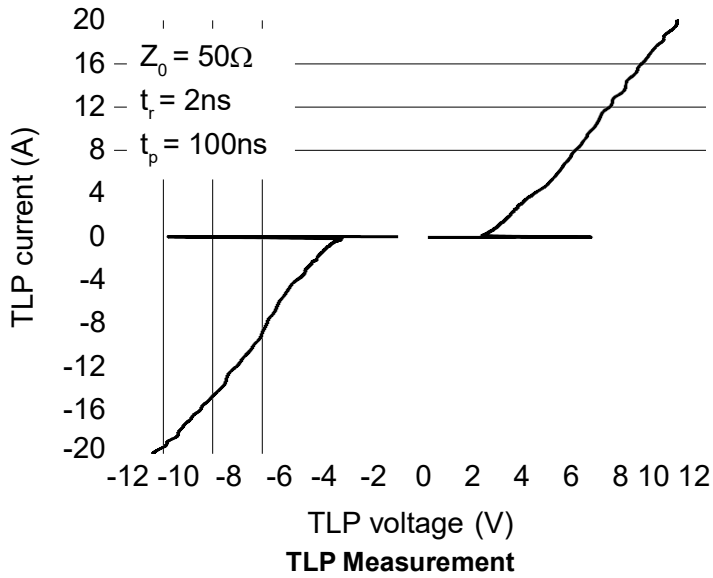
### Typical Characteristics(TA=25°C unless otherwise Specified)



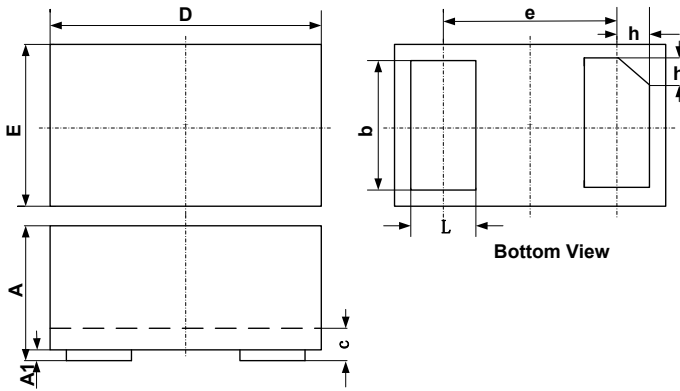
**ESD clamping**  
(+8kV contact discharge per IEC61000-4-2)



**ESD clamping**  
(-8kV contact discharge per IEC61000-4-2)

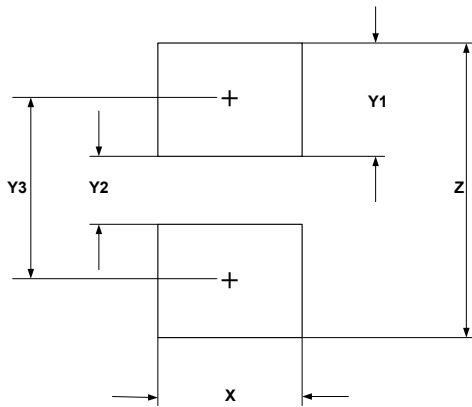


## DFN0603-2 Package Outline Drawing



SYM	DIMENSIONS		
	MILLIMETERS		
	MIN	NOM	MAX
A	0.230	0.300	0.330
A1	0.000	0.020	0.050
b	0.215	0.245	0.275
c	0.120	0.150	0.180
D	0.550	0.600	0.650
e	0.355 BSC		
E	0.250	0.300	0.350
L	0.160	0.190	0.220
h	0.079 BSC		

## Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	0.30	0.012
Y1	0.25	0.010
Y2	0.15	0.006
Y3	0.40	0.016
Z	0.65	0.026

## Order Information

Order code	Package	Packaging	Reel Size
MDFN1C031US	DFN0603-2	10000/Tape & Reel	7 inch