

#### Features

- Ultra small package: 0.6x0.3x0.3mm
- Ultra low capacitance: 0.3pF typical
- Ultra low leakage: nA level
- Low clamping voltage
- 2-pin leadless package
- RoHS compliant



#### IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD)  $\pm 25\text{kV}$  (air),  $\pm 22\text{kV}$  (contact)
- IEC 62000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 4A(8/20us)

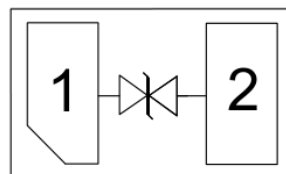
#### Mechanical Characteristics

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

#### Applications

- High Speed Line :USB1.0/2.0/3.0, VGA, DVI.SDI
- High Definition Multi-Media Interface(HDMI1.3/1.4/2.0)
- Serial and Parallel Ports
- Notebooks, Desktops, Servers
- Peripherals
- Cellular handsets and accessories
- Portable instrumentation

#### Schematic and PIN Configuration

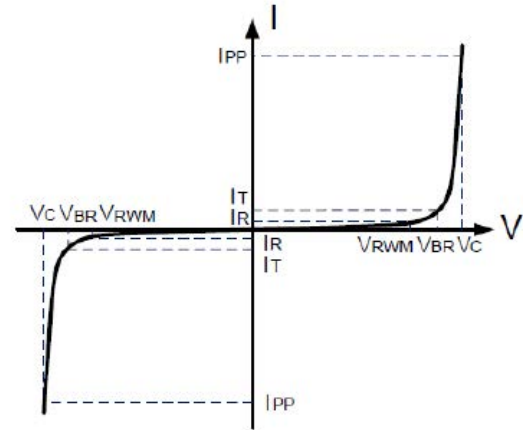


### Absolute Maximum Ratings (TA=25°C unless otherwise specified)

Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	100	W
Peak Pulse Current ( $t_p = 8/20\mu s$ )	$I_{PP}$	4	A
ESD per IEC 61000-4-2(Air)	$V_{ESD}$	$\pm 25$	kV
ESD per IEC 61000-4-2(contact)		$\pm 22$	
Operating Temperature	$T_J$	-55 to +125	°C
Storage Temperature	$T_{STG}$	-55 to +150	°C

### Portion Electronics Parameter

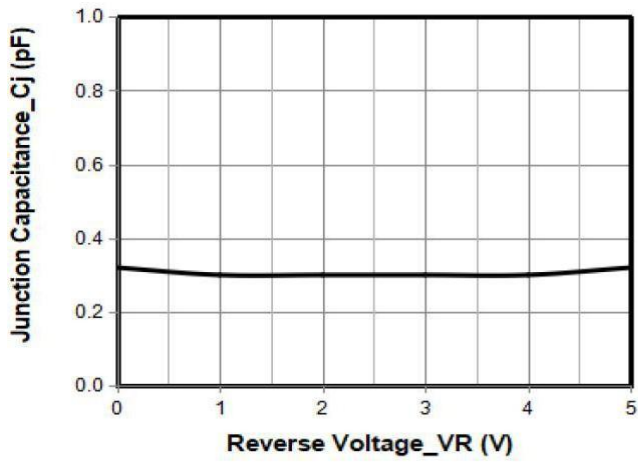
Symbol	Parameter
$I_T$	Test Current
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_C$



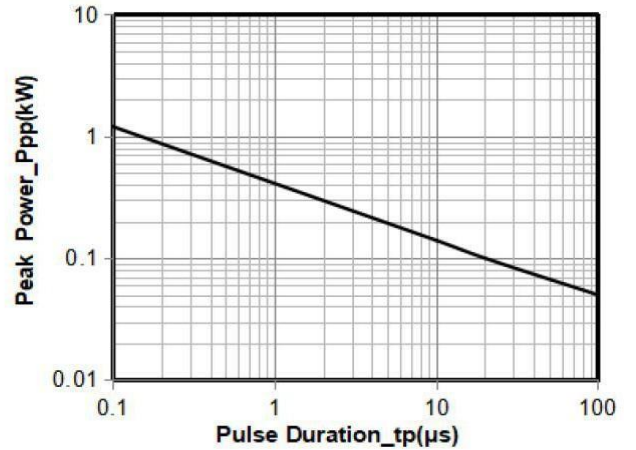
### Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$				3.3	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1mA$	5.0			V
Reverse Leakage Current	$I_R$	$V_{RWM} = 3.3V$			0.2	$\mu A$
Clamping Voltage	$V_C$	$I_{PP} = 1A, t_p = 8/20\mu s$			12	V
		$I_{PP} = 4A, t_p = 8/20\mu s$			25	V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		0.3	0.5	pF

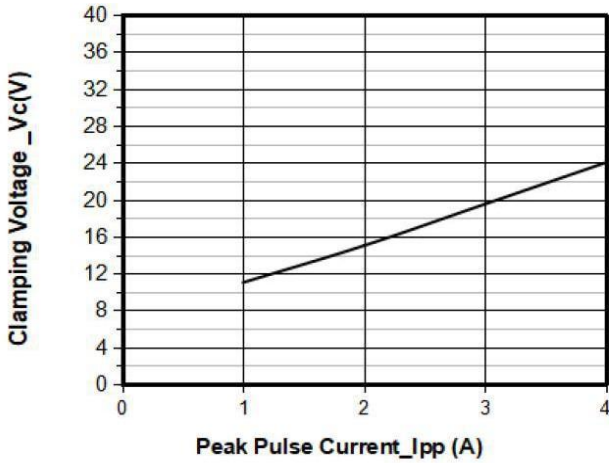
**Typical Characteristics (TA=25°C unless otherwise Specified)**



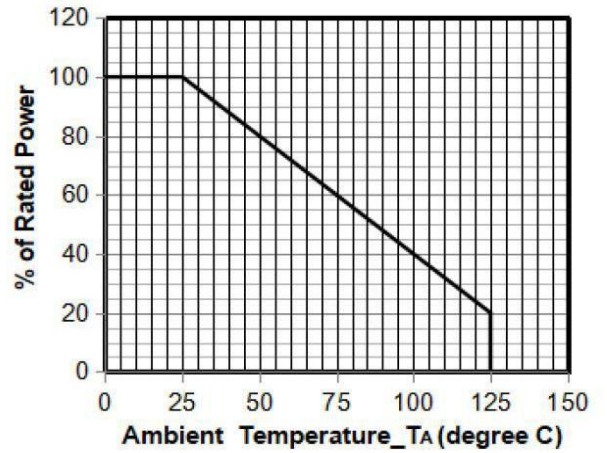
Junction Capacitance vs. Reverse Voltage



Peak Pulse Power vs. Pulse Time



Clamping Voltage vs. Peak Pulse Current



Power Derating Curve

Figure 5: Capacitance vs. Reverse Voltage

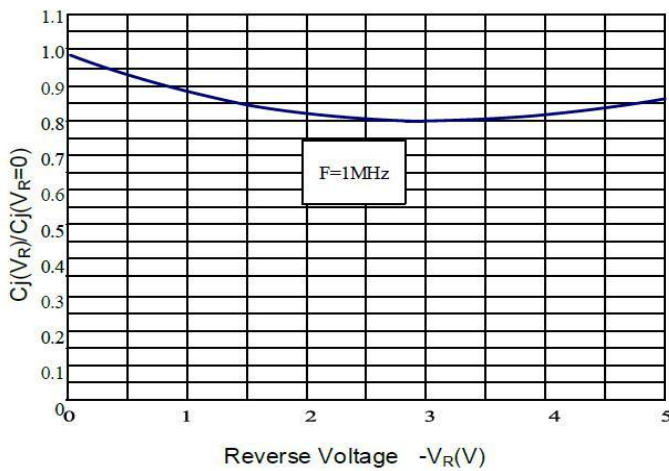
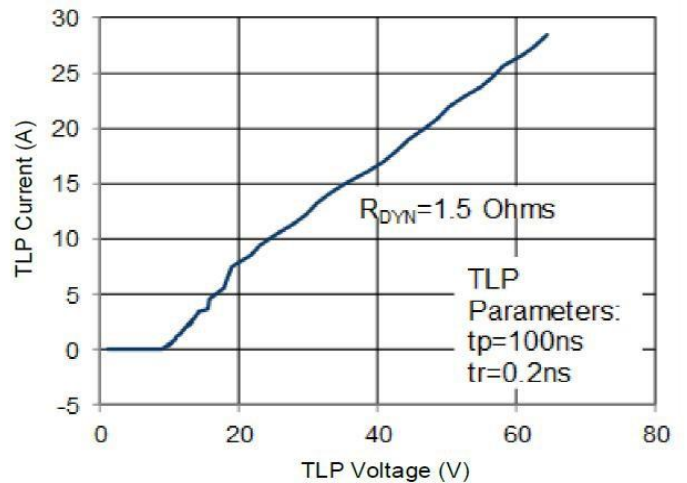
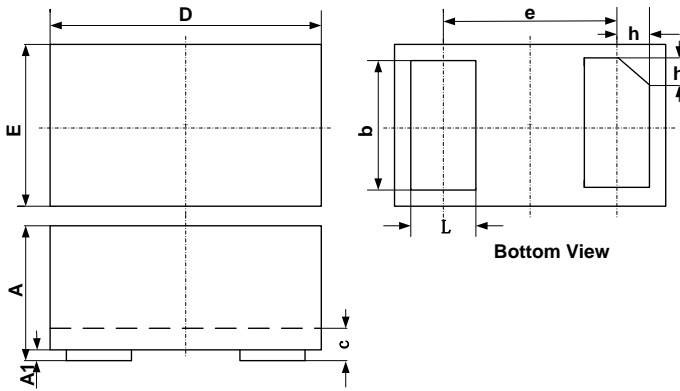


Figure 6: TLP I-V Curve

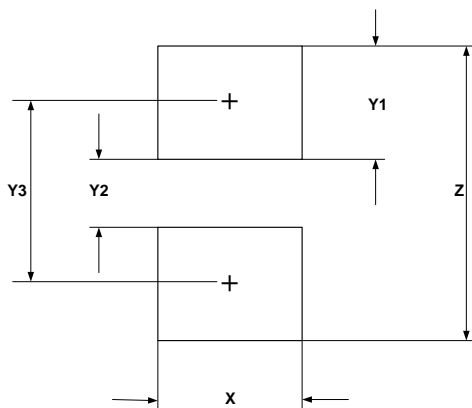


## DFN0603-2 Package Outline Drawing



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
MDFN1C031US1	DFN0603-2	15000/Tape & Reel	7 inch

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