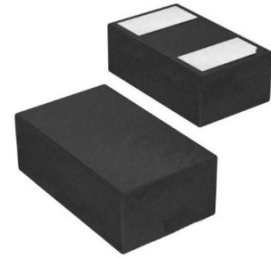


#### Features

- Ultra small package: 1.0x0.6x0.5mm
- 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),  
 $\pm 25\text{kV}$  (contact)
- IEC 61000-4-5 (Lightning ) 5A (8/20  $\mu\text{s}$ )

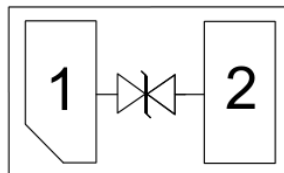
#### Mechanical Characteristics

- Package: DFN1006-2
- Molding compound flammability rating: UL 94V-0
- Marking: Marking Code
- Packaging: Tape and Reel
- RoHS/WEEE Compliant
- MSD Level: 2

#### Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals
- Audio Players
- Industrial Equipment

#### Schematic and PIN Configuration

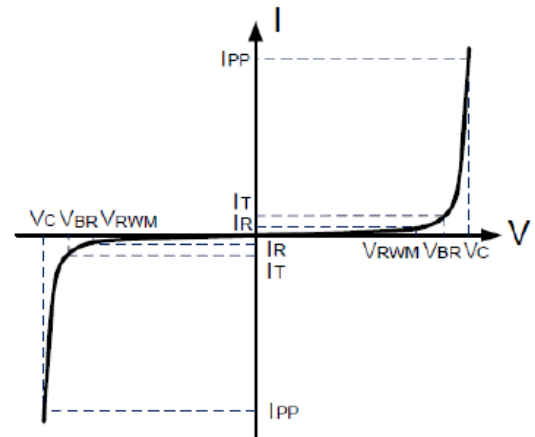


### Absolute Maximum Ratings (TA=25°C unless otherwise specified)

Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	200	W
Peak Pulse Current ( $t_p = 8/20\mu s$ )	$I_{pp}$	5	A
ESD per IEC 61000-4-2(Air)	$V_{ESD}$	$\pm 25$	kV
ESD per IEC 61000-4-2(contact)		$\pm 25$	
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	$V_{RWM}$				18	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1mA$	20			V
Reverse Leakage Current	$I_R$	$V_{RWM} = 18V$			0.5	$\mu A$
ESD Clamping Voltage	$V_C$	$I_{PP} = 4A, t_p = 0.2/100ns(TLP)$		31.5		V
		$I_{PP} = 16A, t_p = 0.2/100ns(TLP)$		37.5		V
Clamping Voltage	$V_C$	$I_{PP} = 5A, t_p = 8/20\mu s$		36	40	V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		12	16	pF

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

Figure 1: Peak Pulse Power Vs Pulse Time

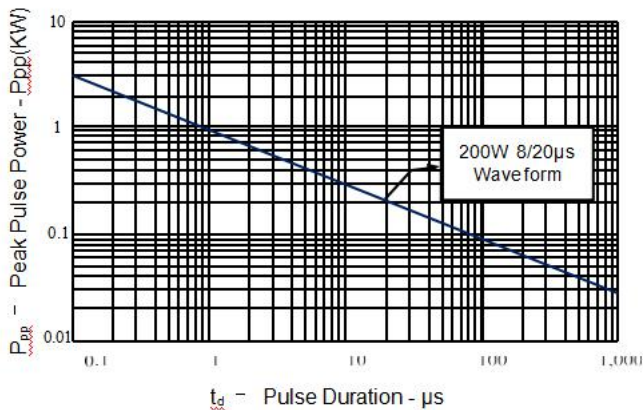


Figure 2: Power Derating Curve

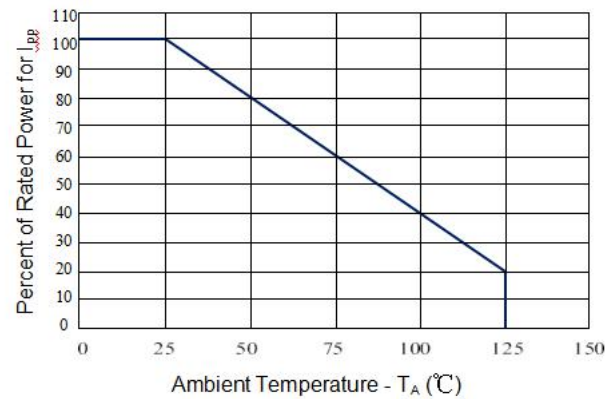


Figure 3: Clamping Voltage vs. Peak Pulse Current

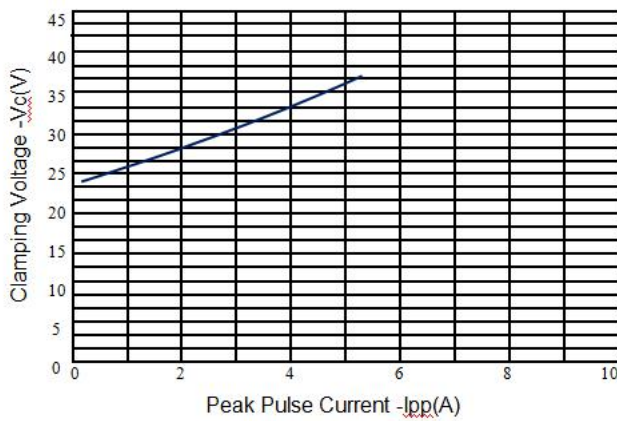


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

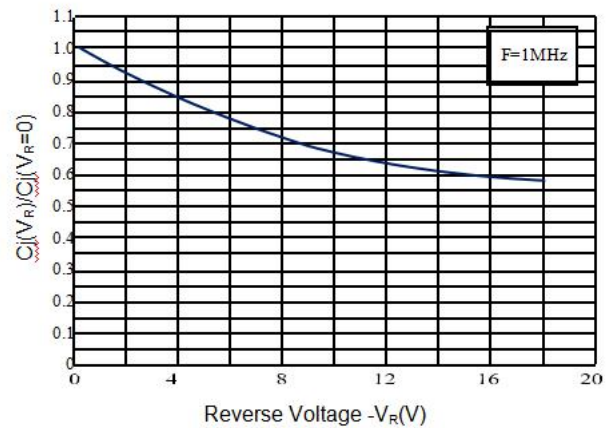


Figure 5: TLP Positive I-V Curve

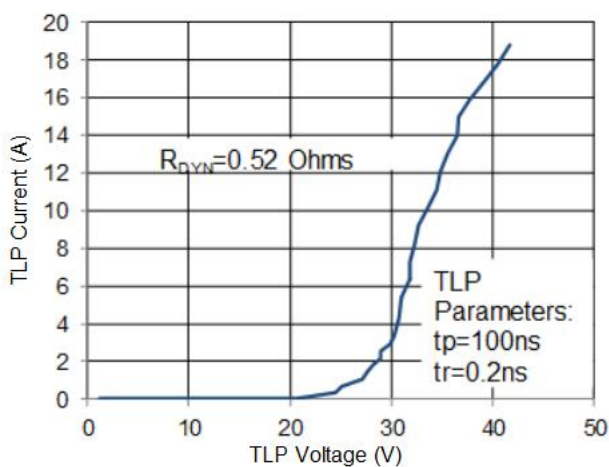
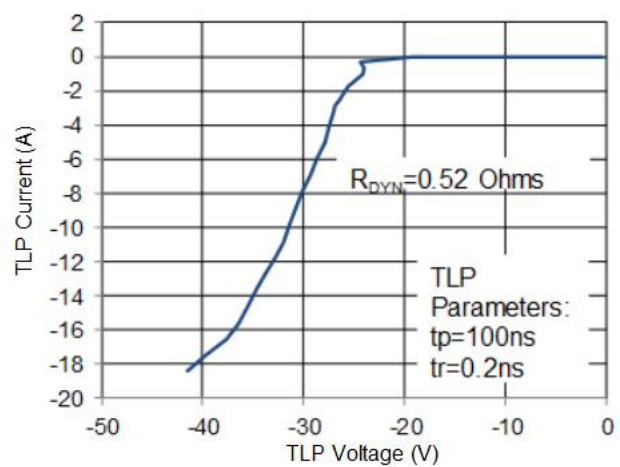
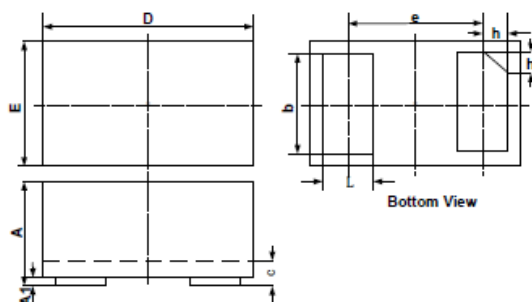


Figure 6: TLP Negative I-V Curve

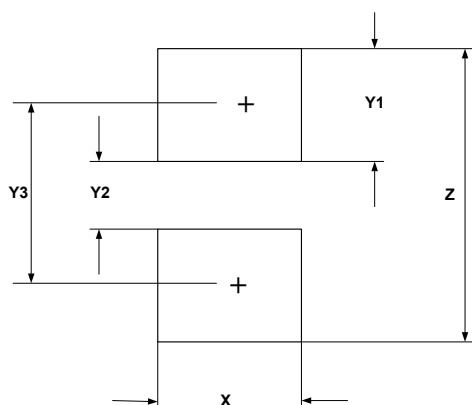


## DFN1006-2 Package Outline Drawing



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.45	0.50	0.55	0.016	0.020	0.022
A1	0.00	0.02	0.05	0.000	0.001	0.002
b	0.45	0.50	0.55	0.018	0.020	0.022
c	0.12	0.15	0.18	0.005	0.006	0.007
D	0.95	1.00	1.05	0.037	0.039	0.041
e	0.65 BSC			0.026 BSC		
E	0.55	0.60	0.65	0.022	0.024	0.026
L	0.20	0.25	0.30	0.008	0.010	0.012
h	0.07	0.12	0.17	0.003	0.005	0.007

## Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	0.60	0.024
Y1	0.50	0.020
Y2	0.30	0.012
Y3	0.80	0.032
Z	1.30	0.052

## Order Information

Order code	Package	Packaging	Reel Size
MDFN2C181VS	DFN1006-2	10000/Tape & Reel	7 inch