

Features

- Ultra small package: 1.0x0.6x0.5mm
- Ultra low capacitance: 0.25pF typical
- Ultra low leakage: nA level
- Low operating voltage: 5V
- 2-pin leadless package
- RoHS compliant



IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 20\text{kV}$ (air), $\pm 15\text{kV}$ (contact)
- IEC 61000-4-5 (Lightning) 4.5A (8/20 μs)

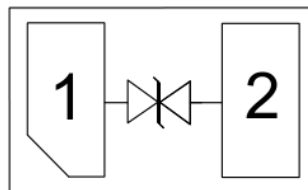
Mechanical Characteristics

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

Applications

- Smart phones
- Display Ports
- MDDI Ports
- USB Ports
- Digital Video Interface (DVI)
- Peripherals
- PCI Express and Serial SATA Ports

Schematic and PIN Configuration

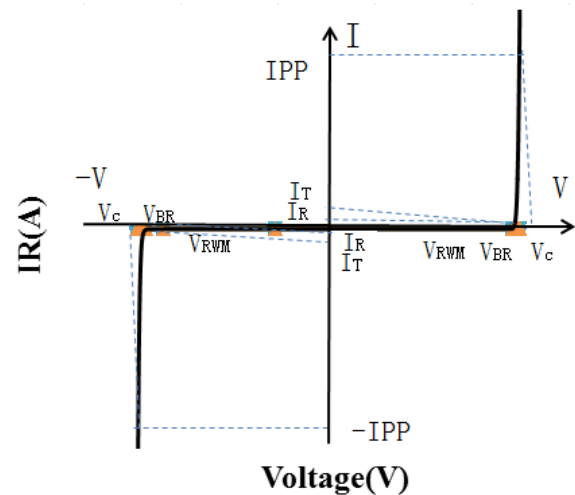


Absolute Maximum Rating(TA=25°C unless otherwise specified)

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	110	Watts
Peak Pulse Current ($t_p = 8/20\mu s$)	I_{pp}	4.5	A
ESD per IEC 61000-4-2(Air)	V_{ESD}	+/-20	kV
ESD per IEC 61000-4-2(contact)		+/-15	
Operating Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical Parameters (T=25°C)

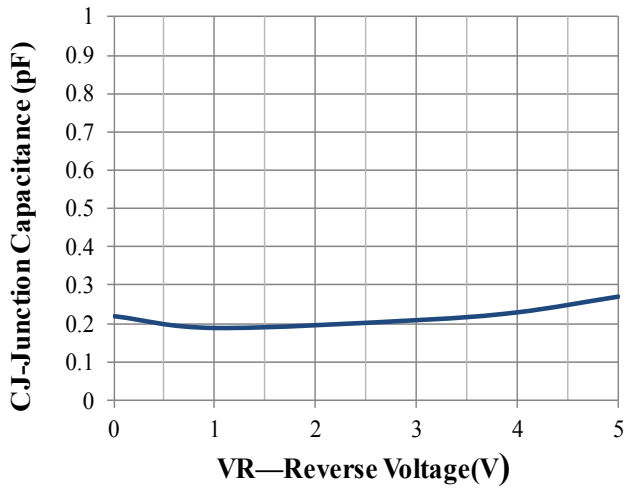
Symbol	Parameter
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_C



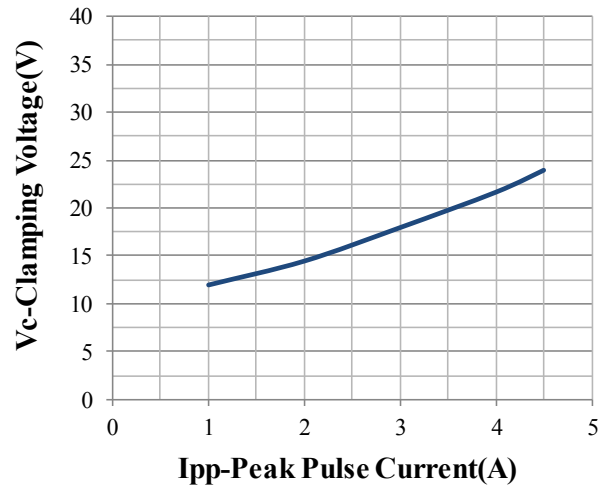
Electrical Characteristics(TA=25°C unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				6	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	6.0	7.5	8.5	V
Reverse Leakage Current	I_R	$V_{RWM}=5V, T=25^\circ C$			0.5	μA
Peak Pulse Current	I_{PP}	$t_p = 8/20\mu s$			4.5	A
Clamping Voltage	V_C	$I_{PP}=1A, t_p=8/20\mu s$		12		V
		$I_{PP}=4.5A, t_p=8/20\mu s$		18	20	V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		0.22	0.26	pF

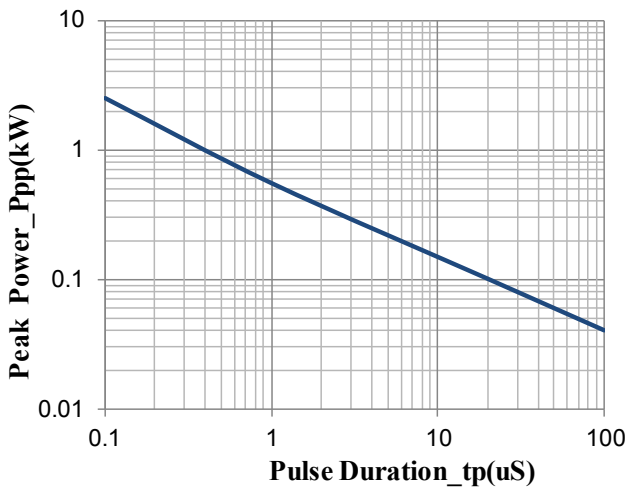
Typical Characteristics(TA=25°C unless otherwise Specified)



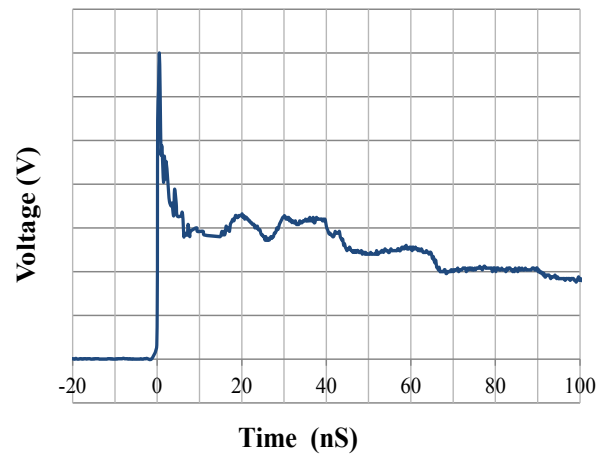
Junction Capacitance vs. Reverse Voltage



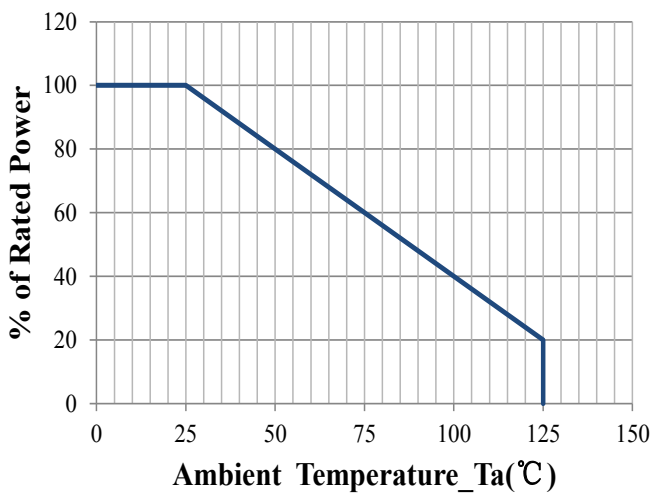
Clamping Voltage vs. Peak Pulse Current



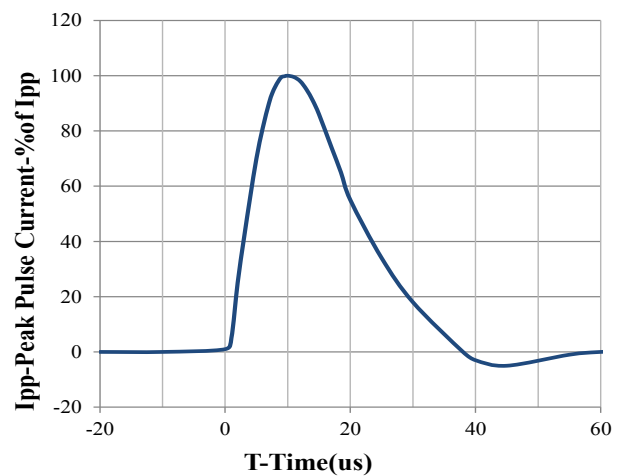
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform

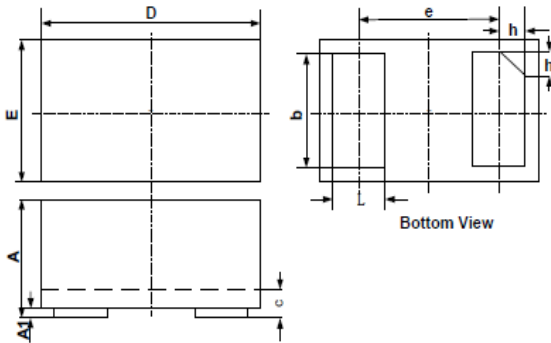


Power Derating Curve



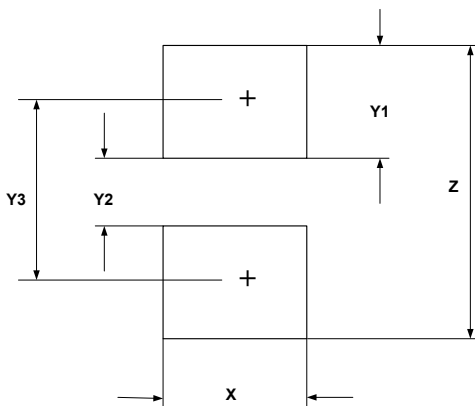
8 X 20us Pulse Waveform

DFN1006-2 Package Outline Drawing



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.45	0.50	0.55	0.018	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
MDFN2C051UA	DFN1006-2	10000/Tape & Reel	7 inch

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