

»Features

- 500Watts peak pulse power ($t_p = 8/20\mu s$)
- Tiny DFN1006 package
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
- IEC 61000-4-4 (EFT) 40A(5/50ns)
- IEC 61000-4-5 (Lightning) 40A (8/20 μs)



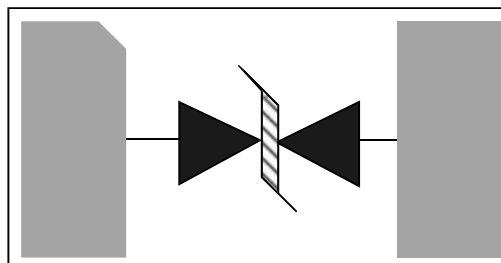
»Applications

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation

»Mechanical Data

- DFN1006 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

»Schematic & PIN Configuration



DFN1006

»Absolute Maximum Rating

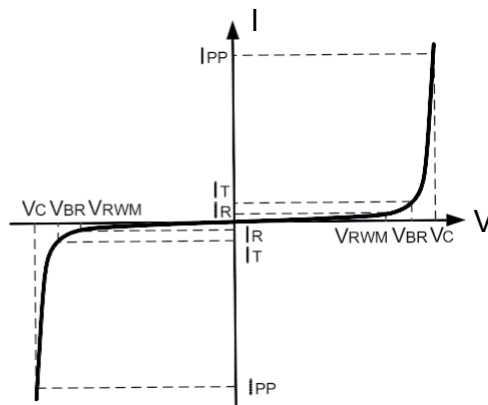
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PP}	500	Watts
Peak Pulse Current ($t_p=8/20\mu s$) (note1)	I_{PP}	40	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	T_L	260(10seconds)	$^{\circ}C$
Junction Temperature	T_J	-55 to + 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}				4.5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	4.7			V
Reverse Leakage Current	I_R	$V_{RWM}=4.5V, T=25^{\circ}C$			0.1	μA
Peak Pulse Current	I_{PP}	$t_p=8/20\mu s$			40	A
Clamping Voltage ²⁾	V_C	$I_{PP}=1A, t_p=8/20\mu s$			5.5	V
Clamping Voltage ²⁾		$I_{PP}=20A, t_p=8/20\mu s$			7.5	V
Clamping Voltage ²⁾		$I_{PP}=40A, t_p=8/20\mu s$		13		V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		90		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: 8/20 μs pulse waveform.

»Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

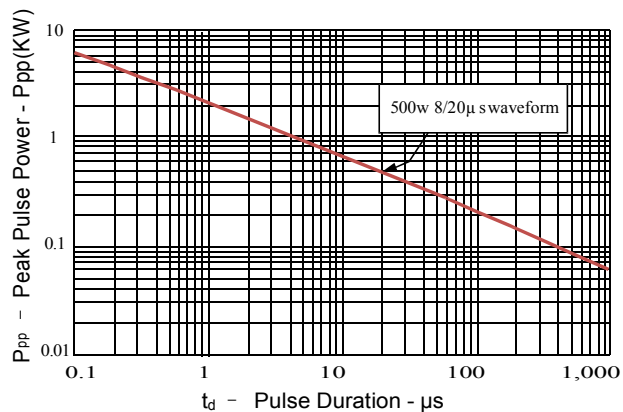


Figure 2: Power Derating Curve

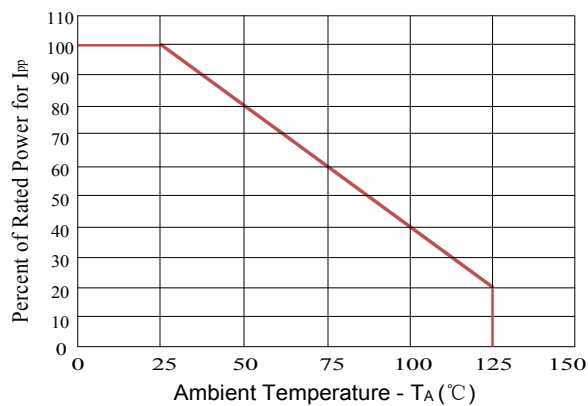


Figure3: Pulse Waveform

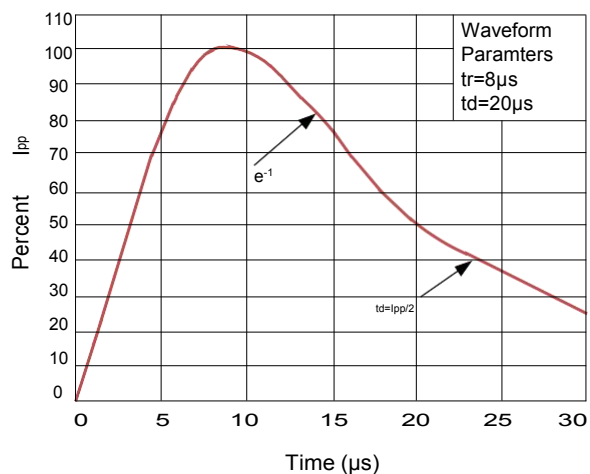
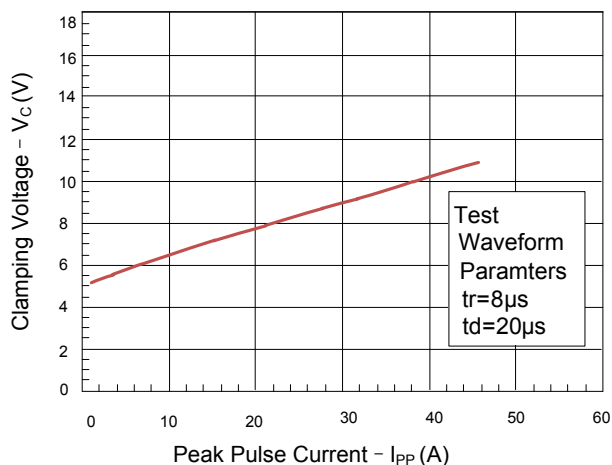
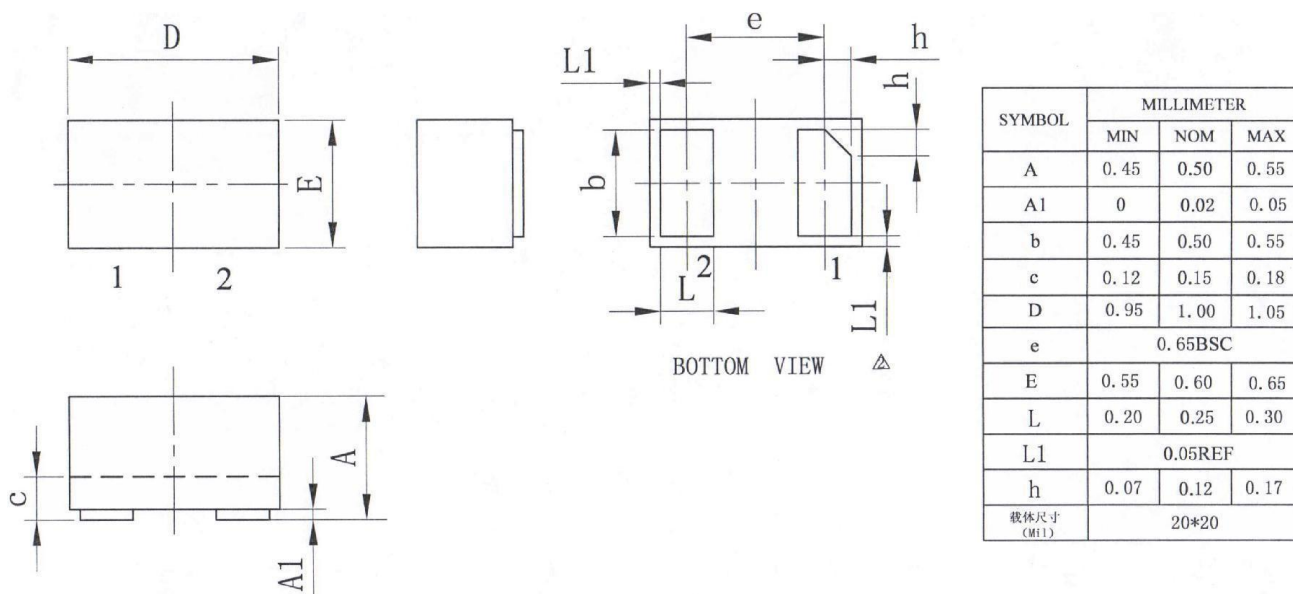


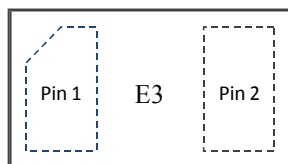
Figure 4: Clamping Voltage vs. Ipp



»Outline Drawing – DFN1006



»Marking



»Ordering information

Order code	Package	Base qty	Delivery mode
BDFN2C4R51V50	DFN1006	10k	Tape and reel