

To:宝利金

Note: Very honored to provide specification and drawings for your approval.
Please return to us one copy. "Approval Sheet" with your approval signatures.

注意： 兹提供敝公司产品有关详细规格书及图面资料， 敬请给予办理测试认定手续。
同时敬请送返一份附有贵公司签认的测试认定后的样品承认书

APPROVAL SHEET

PRODUCTS NAME /品名:ESD

PARTS NO ./料号: PT0321NA

MANUFACTURER /厂家:PTTC

MODEL NO ./使用機種:

APPROVAL NO ./承认书编号: 20200708

DATE/编制日期: 202000708

APPROVAL SIGNATURE/客户承认注记

苏州和朝易电子机械有限公司

Suzhou Ateem Co.,Ltd.

地址： 苏州市高新区长江路 876 号名品商务广场 2 号楼 711 室

T Add: Changjiang Road, Suzhou high tech Zone name 876 goods Business Plaza
Building 2, room 71

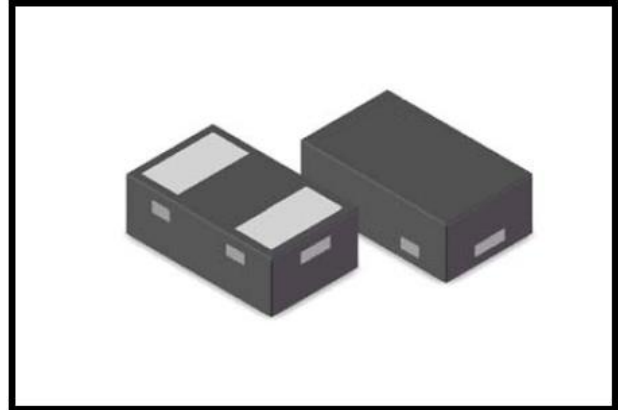
Email: ateem@ateem.cn / Jerry@ateem.cn

Tel: +86- 512-68781643/15962341906; Fax: +86- 512-68781653

PT0321NA – ESD Protection Diode

Feature

- 500 Watts peak pulse power (8/20 μ s)
- Tiny DFN1006 package
- Bidirectional configurations
- Solid state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- IEC61000-4-2 (ESD) \pm 30kV (Air), \pm 30kV (Contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5 (Lightning): 45A (8/20 μ s)



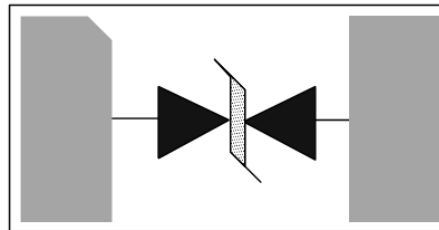
Applications

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

Mechanical Data

- DFN1006 package
- Molding compound flammability rating: UL94 V-0
- Tape and Reel Packaging
- RoHS/WEEE Compliant

Schematic and PIN Configuration



DFN1006

Maximum Rating

Parameter	Symbol	Limit	Unit
IEC61000-4-2 ESD Voltage – Air Mode	$V_{ESD}^{(1)}$	\pm 30	kV
IEC61000-4-2 ESD Voltage – Contact Mode		\pm 30	
Peak Pulse Power	$P_{PP}^{(2)}$	500	W
Peak Pulse Current	$I_{PP}^{(2)}$	45	A
Maximum Lead Solder Temperature (10 seconds duration)	T_L	260	$^{\circ}$ C
Junction Temperature	T_J	-55~125	$^{\circ}$ C
Storage Temperature Range	T_{stg}	-55~125	$^{\circ}$ C

Note:

1. Device stressed with ten non-repetitive ESD pulses.
2. Non-repetitive current pulse 8/20 μ s exponential decay waveform according to IEC61000-4-5.
3. All ratings are measured at environmental temperature of $T_A = 25^{\circ}$ C unless otherwise noted.

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Electrical Characteristics

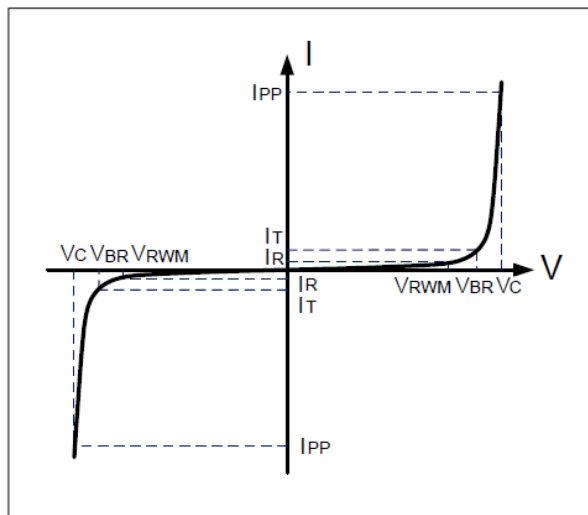
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Stand-off Voltage	$V_{RWM}^{(1)}$				3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	4.7			V
Reverse Leakage Current	I_R	$V_{RWM} = 4.5\text{V}$			0.1	μA
Peak Pulse Current	I_{PP}				45	A
Clamping Voltage	$V_C^{(2)}$	$I_{PP} = 1\text{A}$			5.5	V
		$I_{PP} = 20\text{A}$			7.5	V
		$I_{PP} = 45\text{A}$			11	V
Junction Capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$		70		pF

Note:

1. Other voltages available upon request.
2. Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5.
3. All ratings are measured at environmental temperature of $T_A = 25^\circ\text{C}$ unless otherwise noted.

Electrical Parameters

Symbol	Parameter
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Peak Pulse Current
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_R	Reverse Leakage Current @ V_{RWM}
V_{RWM}	Reverse Stand-off Voltage



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Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

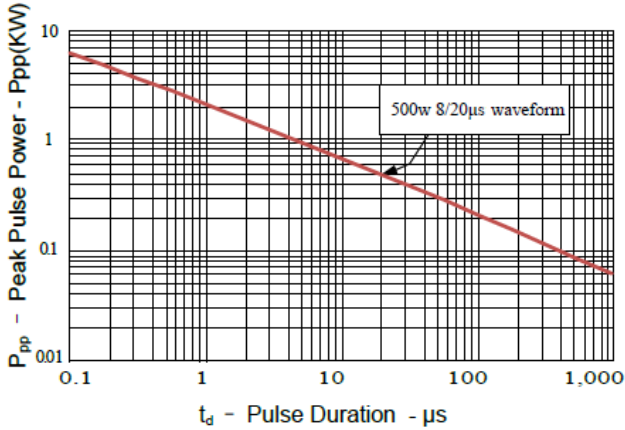


Figure 2: Power Derating Curve

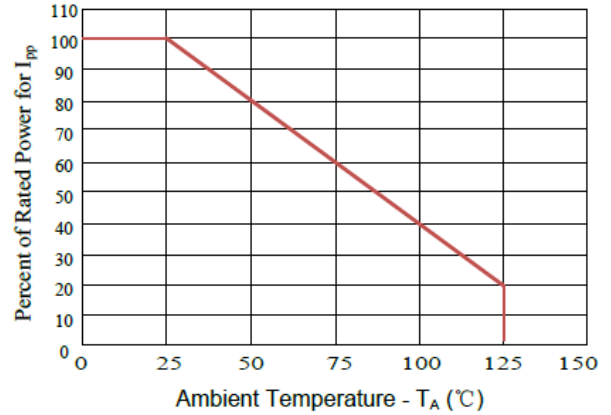


Figure3: Pulse Waveform

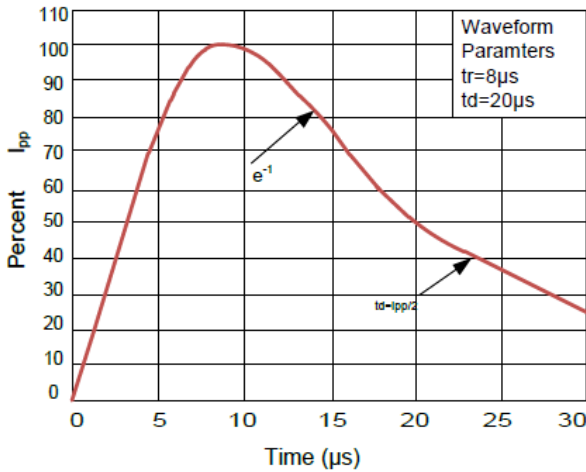
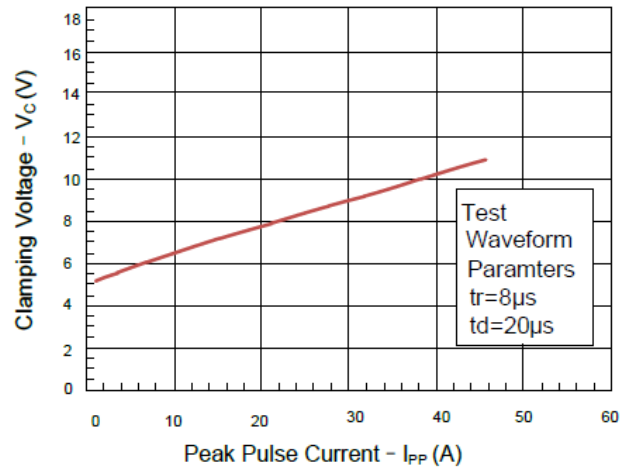
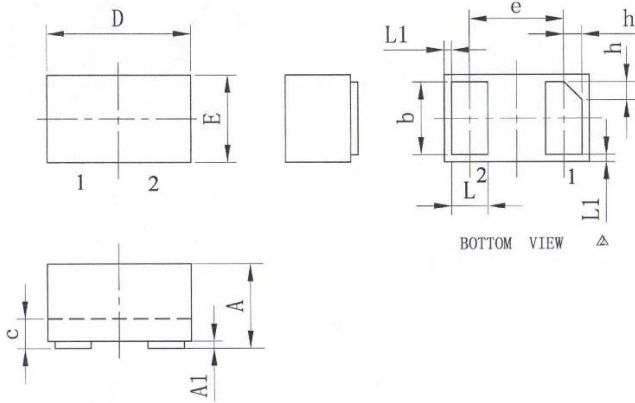


Figure 4: Clamping Voltage vs. I_pp



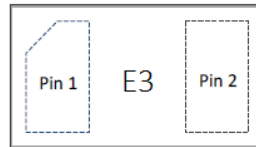
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DFN1006 Package Outline Dimensions



Symbol	Dimensions (mm)		
	Min	Typ	Max
A	0.45	0.50	0.55
A1	0.00	0.02	0.05
b	0.45	0.50	0.55
c	0.12	0.15	0.18
D	0.95	1.00	1.05
e	0.65 BSC		
E	0.55	0.60	0.65
L	0.20	0.25	0.30
L1	0.05 REF		
h	0.07	0.12	0.17

Marking



Packaging Information

Order Code	Packaging	Reel Size	PCS/Reel
PT0321NA	DFN1006	7 inch	10,000