



PRODUCT DATA SHEET



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Please note: Please check the JINGAO Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.jg-semi.cn. Please email any questions regarding the system integration to JINGAO_questions@jgsemi.com.



ESD Protection Diode

Features

- 100Watts peak pulse power (tp = $8/20\mu$)s
- Tiny DFN1006 package
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance (Cj=0.3pF typ. IO to IO)
- Protection one data/power line to:
- IEC 61000-4-2 ±20kV contact ±20kV ai
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 4A (8/20µs)

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

Ver.1.0



Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20 \mu s$)	P _{PP}	100	Watts
Peak Pulse Current ($t_p = 8/20 \mu s$) (note1)	I _{pp}	4.0	А
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V _{ESD}	20 20	kV
Lead Soldering Temperature	T _L	260(10seconds)	°C
Junction Temperature	TJ	-55 to + 125	°C
Storage Temperature	T _{stg}	-55 to + 125	°C

Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V _{RWM}				5.0	V
Reverse Breakdown Voltage	V _{BR}	I _T =1mA	6.0			V
Reverse Leakage Current	I _R	V _{RWM} =5V,T=25°C			100	nA
Peak Pulse Current	I_{PP}	tp =8/20µs			4.0	А
Clamping Voltage	V _C	Ipp=4A,tp=8/20µs			25	V
Junction Capacitance	Cj	IO to IO $V_R = 0V, f = 1MHz$		0.30	0.45	pF

Electrical Parameters (TA = 25°C unless otherwise noted)

Symbol	Parameter
Ipp	Maximum Reverse Peak Pulse Current
Vc	Clamping Voltage @ IPP
Vrwm	Working Peak Reverse Voltage
Ir	Maximum Reverse Leakage Current @ VRWM
VBR	Breakdown Voltage @ IT
Іт	Test Current



Note:. $8/20\mu s$ pulse waveform.

Ver.1.0



Typical Characteristics



Figure3: Pulse Waveform



Figure5: Positive Clamping voltage (TLP)



Figure 2: Power Derating Curve



Figure 4: Clamping Voltage vs.lpp



Figure5: Negative Clamping voltage (TLP)





Outline Drawing – DFN1006





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SYMBOL	MILLIMETER			
	MIN	NOM	MAX	
А	0.45	0.50	0.55	
A1	0	0.02	0.05	
b	0.45	0.50	0.55	
с	0.12	0.15	0.18	
D	0.95	1.00	1.05	
e	0.65BSC			
Е	0.55	0.60	0.65	
L	0.20	0.25	0.30	
L1	0.05REF			
h	0.07	0.12	0.17	
载体尺寸 (Mil)	20*20			





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