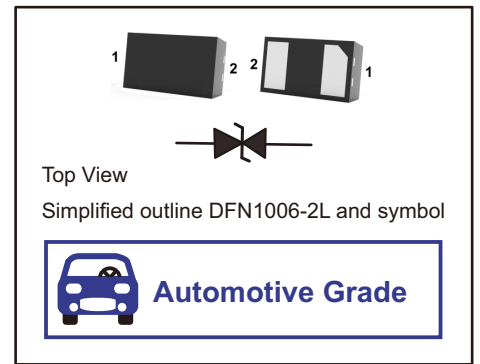


Transient Voltage Suppressors for ESD Protection

General Description

The AT-ESDBULC24V0DS2A is designed to protect voltage sensitive components that require ultra-low capacitance from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium. Because of its low capacitance, it is suited for use in high frequency designs such as USB 2.0 high speed and antenna line applications



FEATURES

- Stand-off voltage: 24V Max.
- Transient protection for each line according to IEC61000-4-2(ESD): $\pm 15\text{kV}$ (contact) $\pm 15\text{kV}$ (air) IEC61000-4-5(Lightning): 5A (8/20 μs)
- Ultra-low capacitance: $C_j = 0.5\text{pF}$ typ.
- Low leakage current
- Qualified to AEC-Q101 Standards for High Reliability

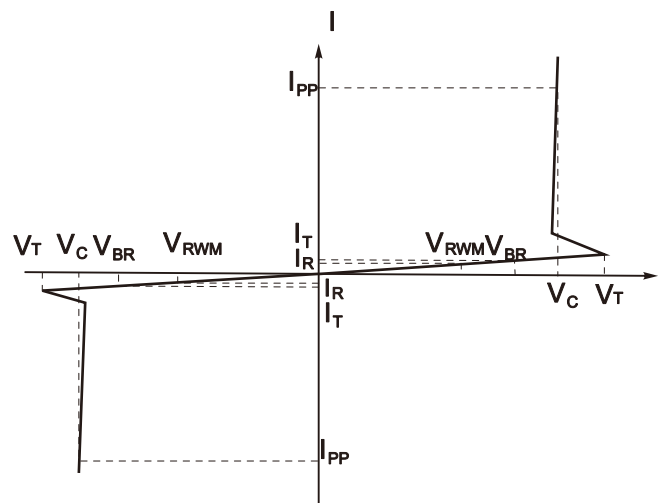
Applications

- Computers and peripherals;
- Audio and video equipment;
- Communication systems;
- Portable electronics.

Electronics Parameter

Parameter	Symbol
Maximum Reverse Peak Pulse Current	I_{PP}
Clamping Voltage @ I_{PP}	V_C
Peak Reverse Working Voltage	V_{RWM}
Reverse Leakage Current @ V_{RWM}	I_R
Trigger Voltage @ I_T	V_T
Test Current	I_T

- Note: 8/20us pulse waveform





MAXIMUM RATINGS(Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μS)	Ppk	35	W
Peak Pulse Current	Ipp	5	A
ESD per IEC 61000-4-2(Air)	VESD	±15	KV
ESD per IEC 61000-4-2(Contact)		±15	
Operating Temperature Range	TJ	-40~+125	°C
Storage Temperature Range	Tstg	-55~+150	°C

ELECTRICAL CHARACTERISTICS(Ta=25°C unless otherwise noted)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse Stand-off Voltage	VRWM				24	V
Breakdown Voltage	VBR	IT=1mA	26	30		V
Holding Voltage	Vh	IT=100mA	2	2.9		V
Reverse Leakage Current	IR	VRWM=18V			0.2	μA
Clamping Voltage	VC	I _{PP} =1A, t _p =8/20μs		4		V
		I _{PP} =5A, t _p =8/20μs		6	8	V
Junction Capacitance	Cj	VR=0V , f=1MHz		0.5	0.7	pF



Fig 1. Junction Capacitance vs. Reverse Voltage

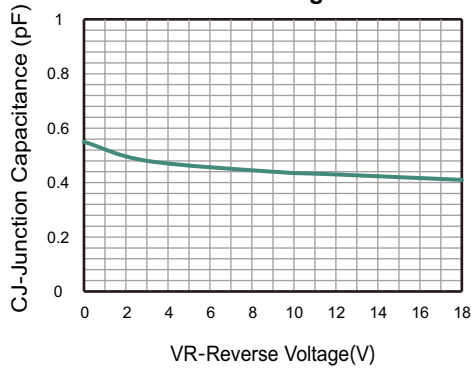


Fig 2. Clamping Voltage vs. Peak Pulse Current

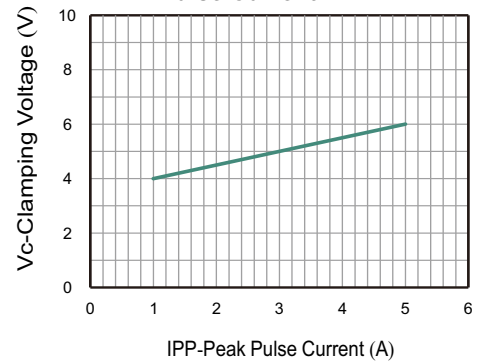


Fig 3. Power Derating Curve

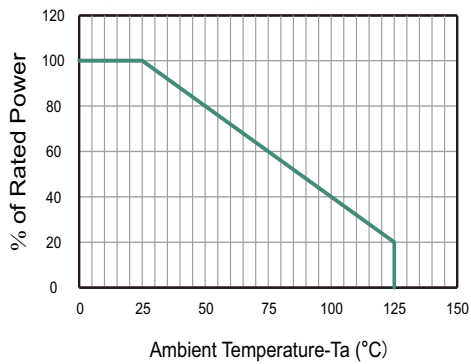
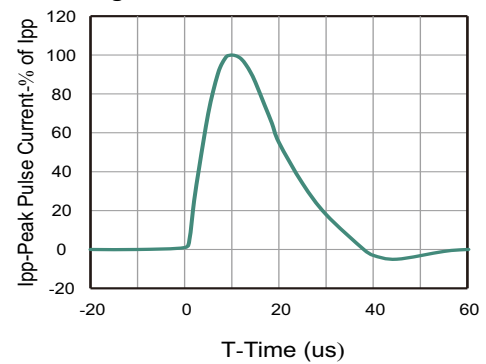
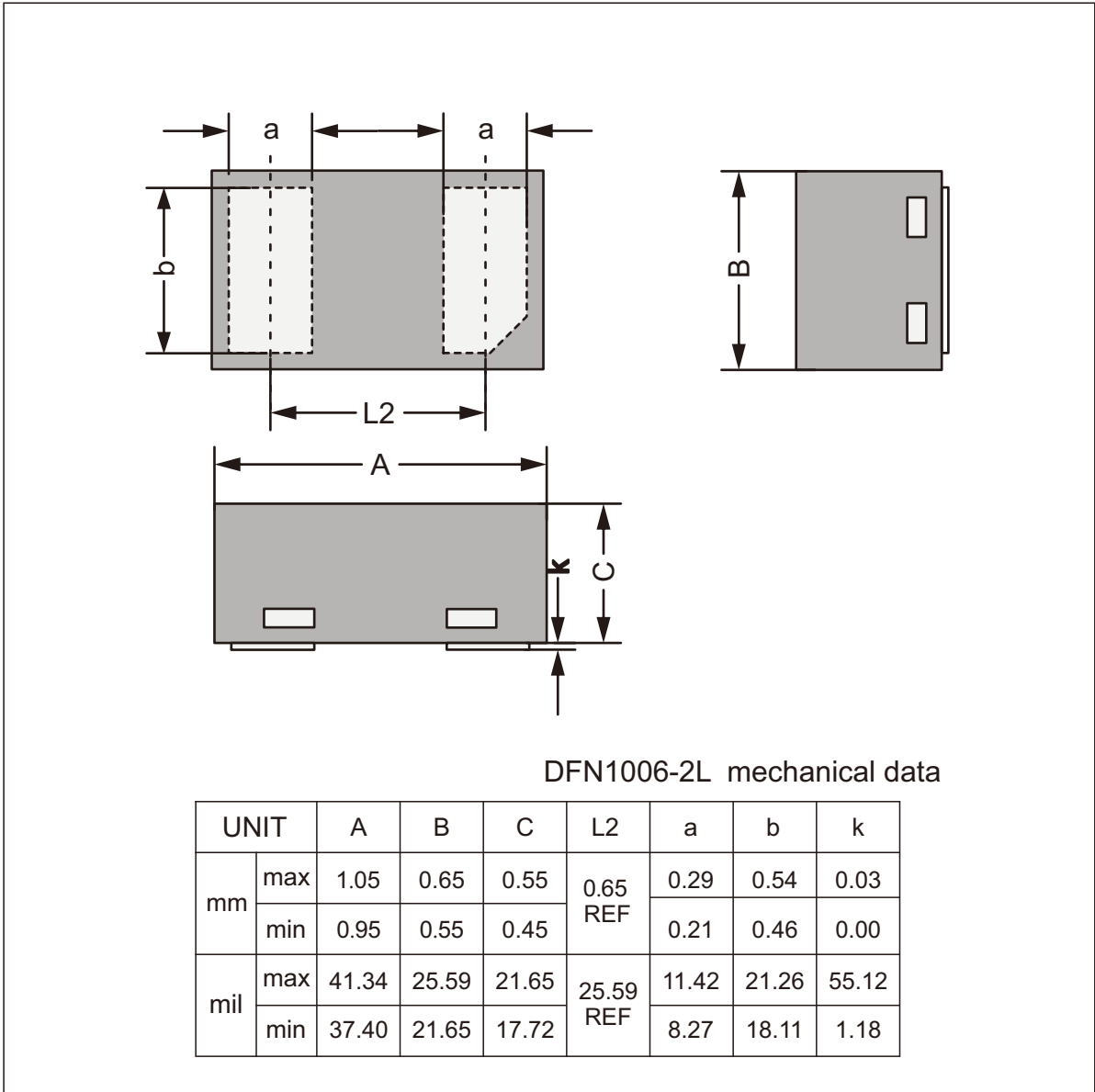


Fig 4. 8 X 20us Pulse Waveform

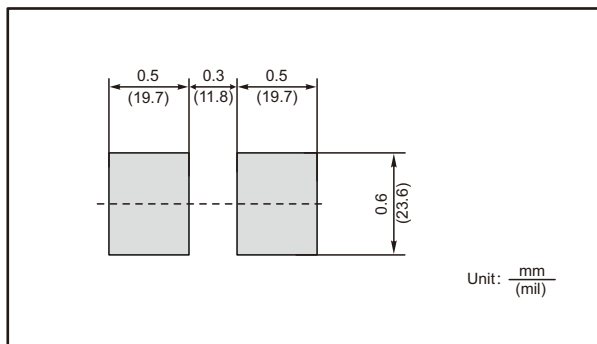




DFN1006-2L Package Outline Dimensions



The recommended mounting pad size



Marking

Type number	Marking code
ESDBULC24V0DS2A	24L



Important Notice and Disclaimer

Jingdao Microelectronics reserves the right to make changes to this document and its products and specifications at any time without notice.

Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

Jingdao Microelectronics makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, not does Jingdao Microelectronics assume any liability for application assistance or customer product design.

Jingdao Microelectronics does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of Jingdao Microelectronics.

Jingdao Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of Jingdao Microelectronics.