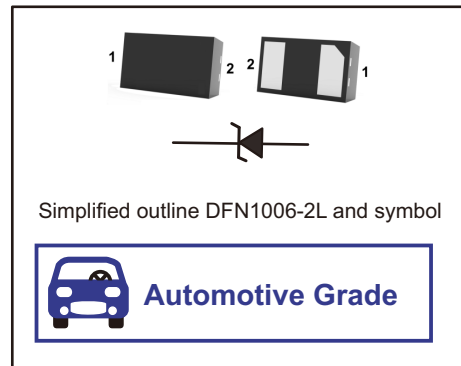


Transient Voltage Suppressors for ESD Protection

General Description

The AT-ESDULC5V0DS2A 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

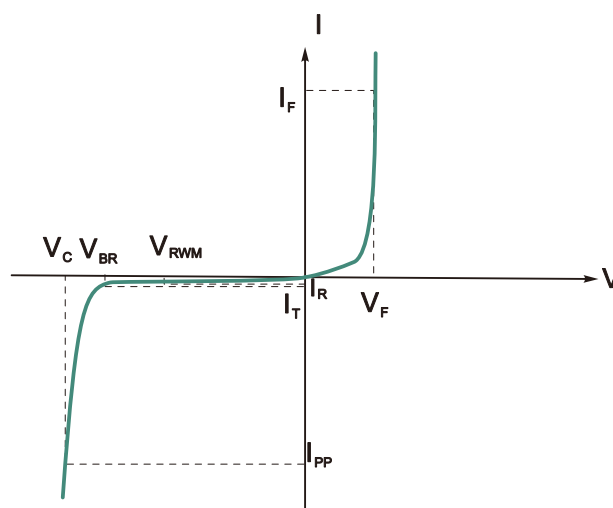
- Stand-off voltage: 5V Max.
- Transient protection for each line according to IEC61000-4-2(ESD): $\pm 30\text{kV}$ (contact) $\pm 30\text{kV}$ (air)
IEC61000-4-5(Lightning): 4.5A (8/20 μs)
- Ultra-low capacitance: $C_j = 0.5\text{pF}$ typ.
- Low leakage current
- Qualified to AEC-Q101 Standards for 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
Breakdown Voltage @ I_T	V_{BR}
Test Current	I_T
Forward Current	I_F
Forward Voltage @ I_F	V_F





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

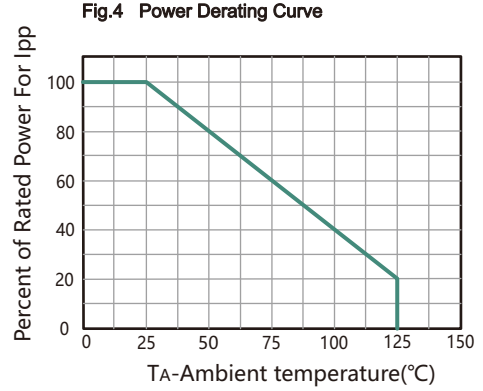
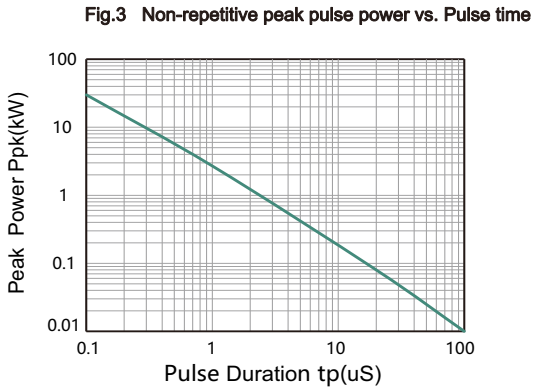
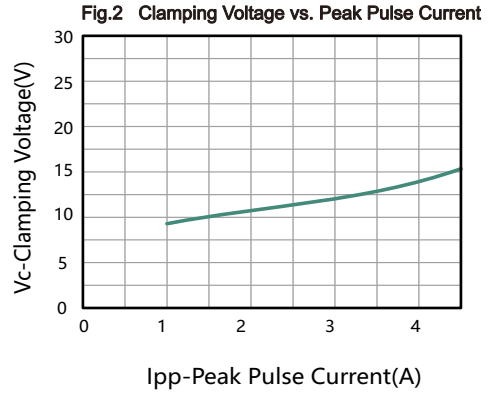
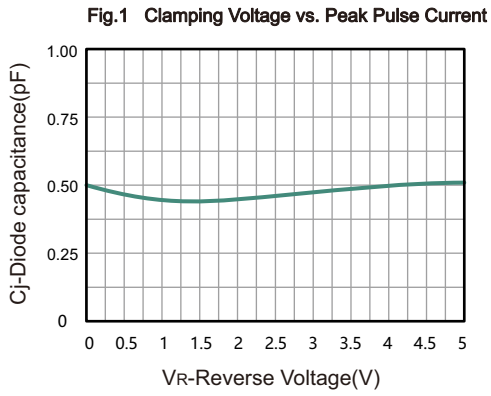
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μS)	Ppk	80	W
Peak Pulse Current	Ipp	4.5	A
ESD per IEC 61000-4-2(Air)	VESD	±30	KV
ESD per IEC 61000-4-2(Contact)		±30	
Operating Temperature Range	TJ	-55~+125	°C
Storage Temperature Range	Tstg	-55~+150	°C

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse Stand-off Voltage	VRWM				5	V
Breakdown Voltage	VBR	IT=1mA	6.0	7.0	8.5	V
Reverse Leakage Current	IR	V=VRWM, Ta=25°C			0.2	μA
Clamping Voltage	VC	IPP=1A, tp=8/20μs			9.0	V
		IPP=4.5A, tp=8/20μs			16	
Junction Capacitance	Cj	VR=0V , f=1MHz		0.5	0.6	pF

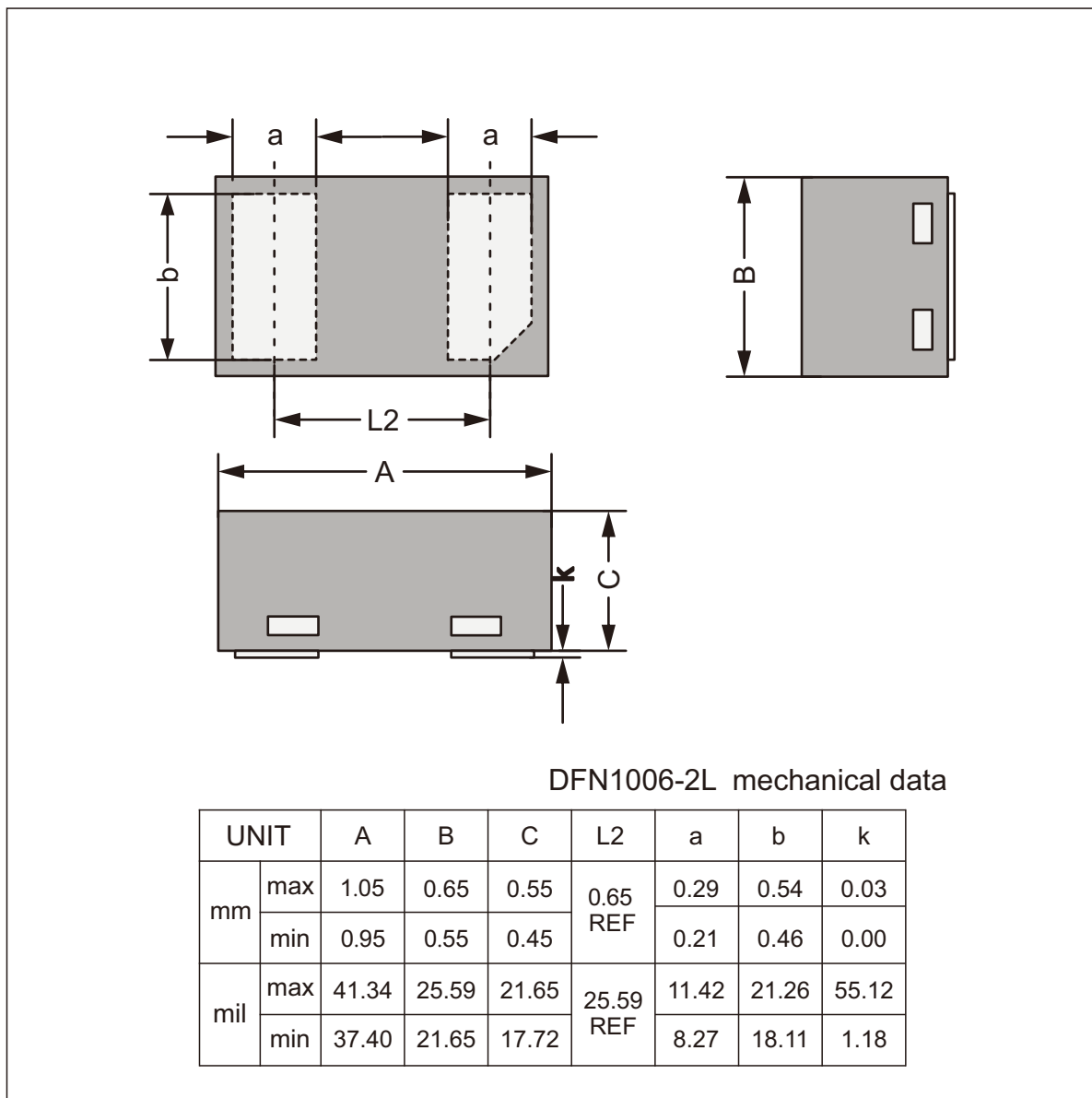


Typical Characteristics

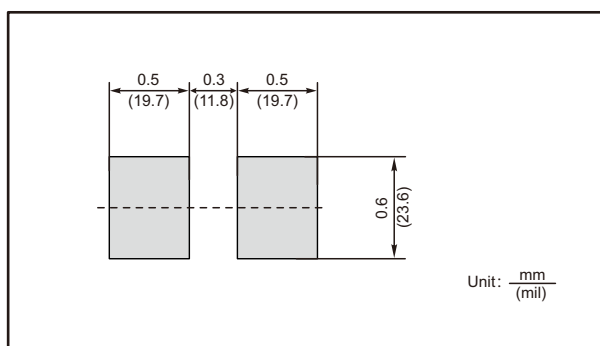




DFN1006-2L Package Outline Dimensions



The recommended mounting pad size



Marking

Type number	Marking code
ESDULC5V0DS2A	RS



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