



ESDSL5V001P0B

1-Line Bi-directional TVS Diode

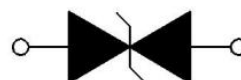
1. Features

- 2-pin lead-less package
- Junction capacitance (Max value: 0.5pF)
- Peak Pulse current (8/20μs) Max:5A
- IEC61000-4-2 (ESD) ±20kV (air), ±15kV (contact)
- Low clamping voltage
- Low leakage current
- Working voltages:5V
- RoHS Compliant

2. Mechanical Data

- Case:Molded Plastic,DFN0603-2L.
- Epoxy:UL 94V-0 rate flame retardant.
- Terminals:Plated Leads Solderable per MIL-STD-750, Method-2026.
- Marking:H
- Marking:marked on body.

DFN0603-2L



Bi-directional

3. Maximum Ratings

Electrical Characteristics Rating at 25°C ambient temperature unless otherwise specified.

Characteristic	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P _{PP}	125	W
Peak Pulse Current (8/20μs)	I _{PP}	5	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	±20	KV
ESD per IEC 61000-4-2 (Contact)		±15	
Junction Temperature	T _j	-55~+125	°C
Storage Temperature	T _{stg}	-55~+150	°C

4. Electrical Characteristics (T_A=25°C unless otherwise noted)

Characteristics	Symbol	Condition	Min	TYP	Max	Unit
Reverse Working Voltage	V _{RWM}		-	-	5	V
Reverse Breakdown Voltage	V _{BR}	I _R = 1mA	6	-	9	V
Reverse Leakage Current	I _R	V _R =5V	-	-	0.2	uA
Clamping voltage	V _C	I _{PP} = 1A, T _p =8/20us	-	-	12	V
Clamping voltage	V _C	I _{PP} = 5A, T _p =8/20us	-	-	25	V
Junction capacitance	C _J	V _R =0V, f =1MHz	-	0.3	0.5	pF



5. Rating And Characteristic Curves

FIG1: Power rating derating curve

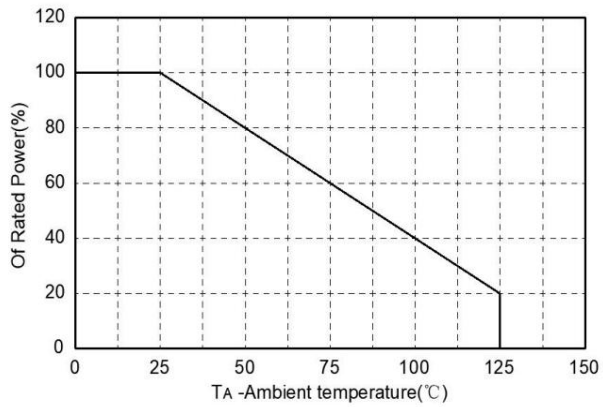


FIG2: pulse Waveform

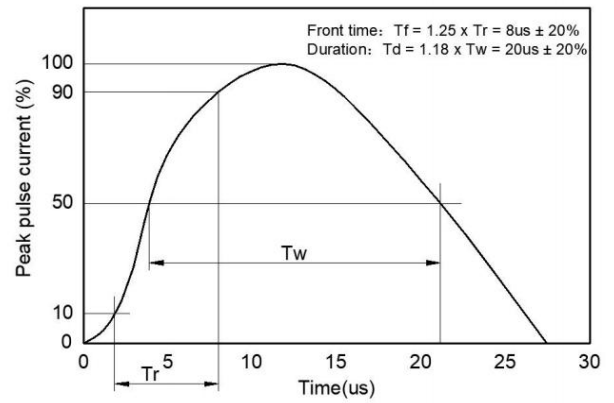


FIG3: Capacitance between

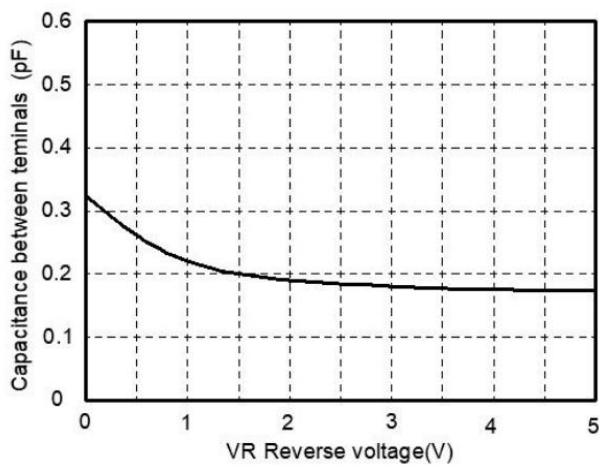
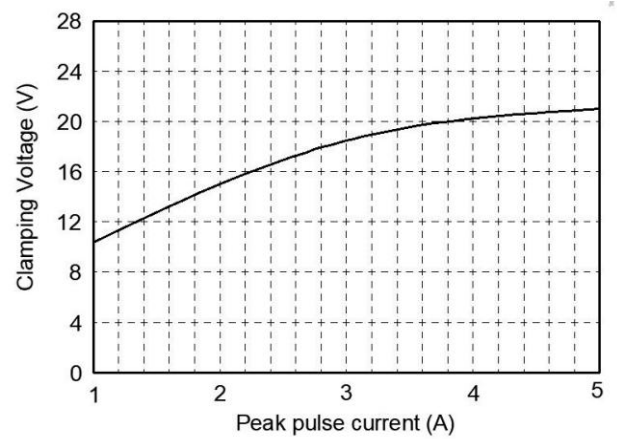


FIG4: Clamping Voltage vs. Peak Pulse Current

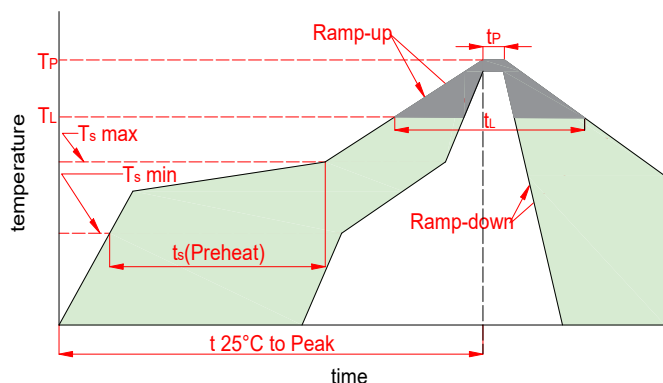




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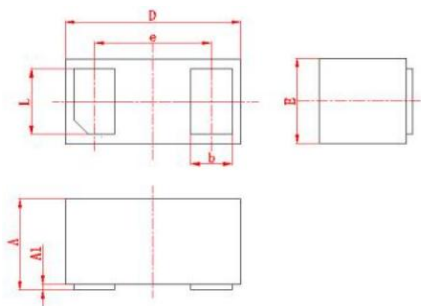
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6. Soldering Parameters

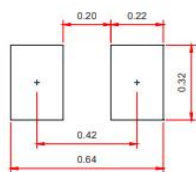


Reflow Condition		Lead-free
Pre Heat	Temp. min($T_s(\min)$)	150℃
	Temp. max($T_s(\min)$)	200℃
	Time(min to max)(t_s)	60~120s
Aver. ramp up rate(Liquidus Temp.)(T_L)to peak		3℃/s max
$T_s(\max)$ to T_L -Ramp-up Rate		3℃/s max
Reflow	Temp. (T_L)(Liquidus)	217℃
	Temp. (t_L)(Liquidus)	60~150s
Peak Temp. (T_P)		260 ^{+0/-5} ℃
Time within actual peak Temp. (t_p)		30s max
Ramp-down Rate		6℃/s max
Time 25℃ to peak Tempe. (T_P)		8 minutes max
Do not exceed		260℃

7. Dimensions



Mounting PAD Layout



Symbol	Inches		Millimeters	
	Min	Max	Min	Max
A	0.011	0.015	0.27	0.37
A1	0.000	0.002	0.00	0.05
D	0.022	0.026	0.55	0.65
E	0.010	0.014	0.25	0.35
e	0.016		0.40	
b	0.004	0.007	0.09	0.19
L	0.007	0.011	0.18	0.28

8. Part Marking System

Cathode Band



9. Package Information

Package	Part Number	Marking Code	Quantity(pcs)
DFN0603-2L	ESDSL5V001P0B	H	15000



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