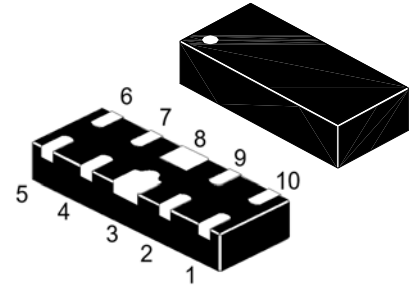
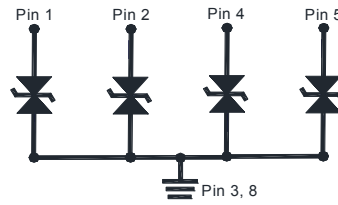


ESDLC0531MP

ESD Protection Diode

Features

- Low clamping voltage
- Low operating voltage
- Bi-direction high reliability



1. I/O 2. I/O 3. GND 4. I/O 5. I/O
6. NC 7. NC 8. GND 9. NC 10. NC
DFN2510-10 Plastic Package

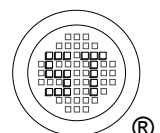
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20 \mu\text{s}$)	P_{PK}	80	W
Peak Pulse Current ($t_p = 8/20 \mu\text{s}$)	I_{PP}	4	A
IEC61000-4-2 (ESD)	Air Contact V_{ESD}	± 20 ± 12	KV
Junction Temperature Range	T_j	- 55 to + 125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	V_{RWM}	-	-	5	V
Reverse Breakdown Voltage at $I_R = 1 \text{ mA}$	$V_{(BR)R}$	6	-	11	V
Reverse Current at $V_R = 5 \text{ V}$	I_R	-	-	100	nA
Clamping Voltage at $I_{PP} = 1 \text{ A}$, $t_p = 8/20 \mu\text{s}$ at $I_{PP} = 4 \text{ A}$, $t_p = 8/20 \mu\text{s}$	V_C	-	-	12 20	V
ESD Clamping Voltage at $I_{TLP} = 4 \text{ A}$, $t_p = 0.2/100 \text{ ns}$ at $I_{TLP} = 16 \text{ A}$, $t_p = 0.2/100 \text{ ns}$	V_{CL}	-	13.2 26.6	-	V
Junction Capacitance at $V_R = 0 \text{ V}$, $f = 1 \text{ MHz}$	C_J	-	-	0.8	pF
Dynamic Resistance ¹⁾	R_{dyn}	-	1.1	-	Ω

¹⁾ Dynamic Resistance calculated from $I_{TLP} = 4 \text{ A}$ to $I_{TLP} = 16 \text{ A}$.



Electrical Characteristic Curves

Fig 1. Pulse Waveform

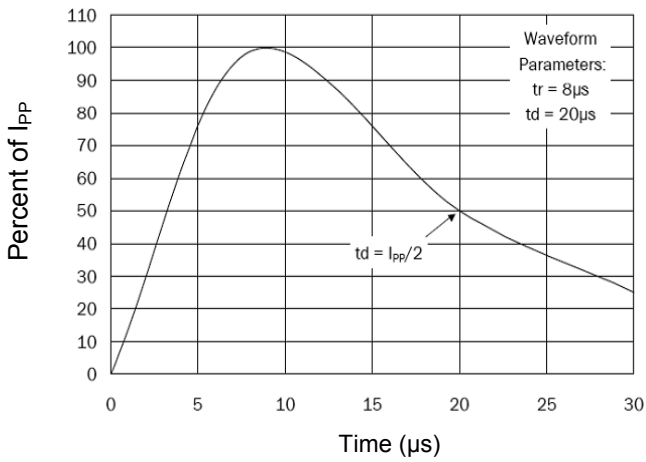


Fig 2. Power Derating Curve

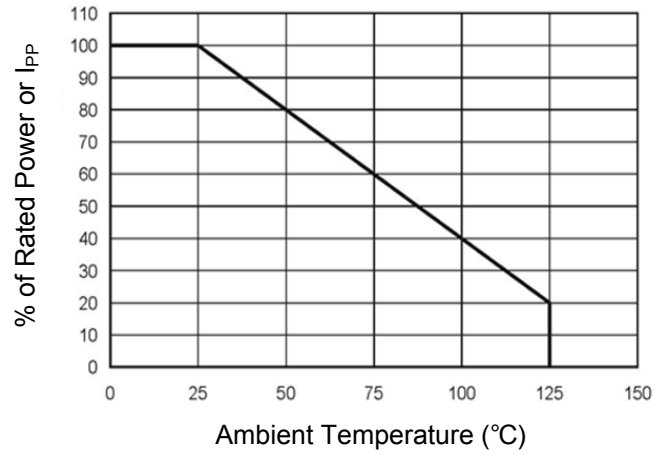


Fig 3. Clamping Voltage Curve

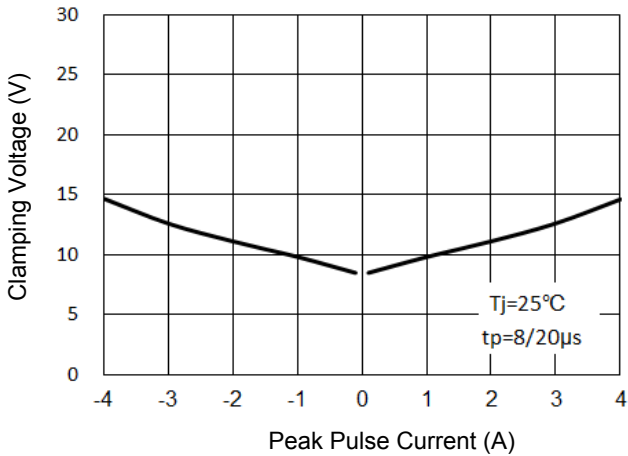


Fig 4. Junction Capacitance

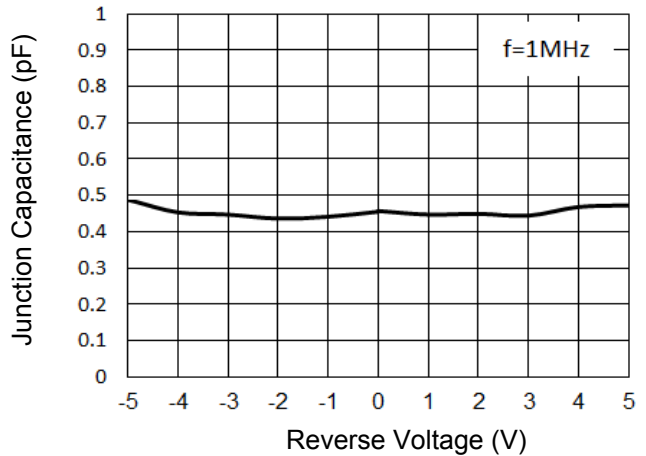
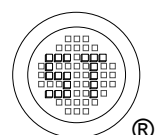
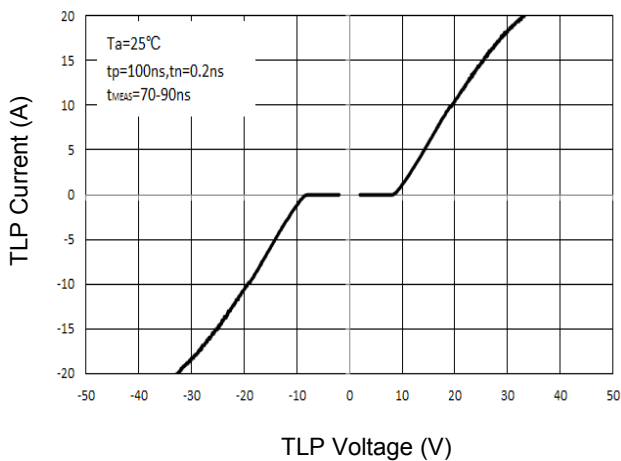


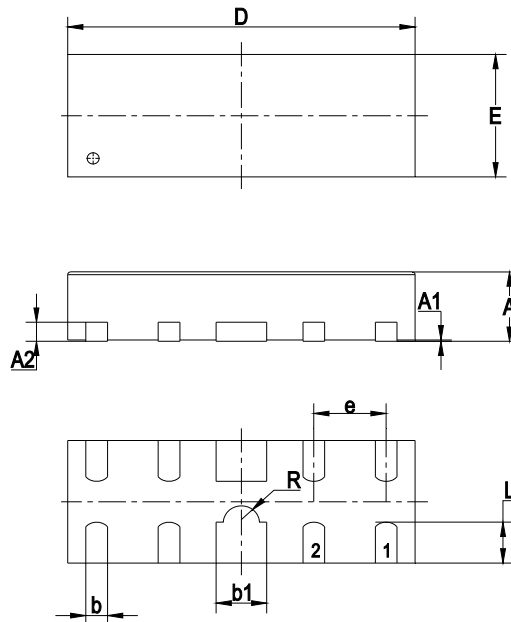
Fig 5. TLP Curve



ESDLC0531MP

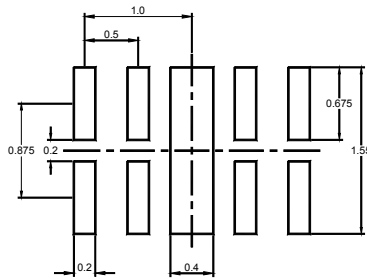
Package Outline Dimensions (Units: mm)

DFN2510-10



UNIT	A	A1	A2	b	b1	D	E	e	L	R
mm	0.46	0	0.13	0.15	0.35	2.40	0.90	0.50	0.30	0.125
	0.51	0.05	Typ.	0.25	0.45	2.60	1.10	Typ.	0.425	Typ.

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
DFN2510-10	8	4 ± 0.1	0.157 ± 0.004	178	7	4,000

Marking information

" 531 " = Part No.
 " YYWW " = Date Code Marking
 " YY " = Year
 " WW " = Week
 Font type: Arial

