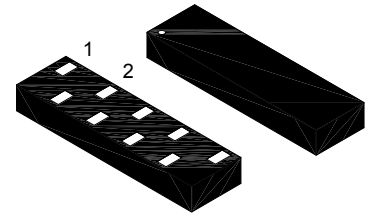
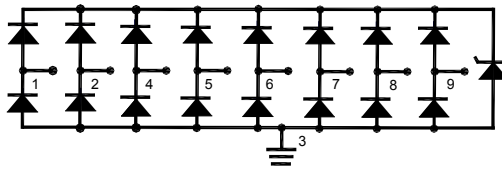


ESDLC7538MP

ESD Protection Diode

Features

- Protects eight high speed lines
- Low ESD clamping voltage
- Low capacitance



Marking Code: " 7538MP "
DFN3810-9 Plastic package

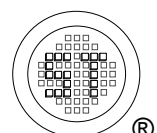
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20 \mu\text{s}$)	P_{PK}	75	W
Peak Pulse Current ($t_p = 8/20 \mu\text{s}$)	I_{PP}	5	A
IEC61000-4-2 (ESD) Air Contact	V_{ESD}	± 25 ± 20	KV
Operation 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, Any I/O to Gnd	V_{RWM}	-	-	5	V
Reverse Breakdown Voltage at $I_T = 1 \text{ mA}$, Any I/O to Gnd	$V_{(BR)R}$	6.5	-	11	V
Reverse Current at $V_{RWM} = 5 \text{ V}$, Any I/O to Gnd	I_R	-	-	0.1	μA
Clamping Voltage at $I_{PP} = 1 \text{ A}$, $t_p = 8/20 \mu\text{s}$, Any I/O to Gnd at $I_{PP} = 5 \text{ A}$, $t_p = 8/20 \mu\text{s}$, Any I/O to Gnd	V_C	-	-	12 15	V
ESD Clamping Voltage ¹⁾ at $I_{TLP} = 4 \text{ A}$, $t_{lp} = 0.2/100 \text{ ns}$ at $I_{TLP} = 16 \text{ A}$, $t_{lp} = 0.2/100 \text{ ns}$	V_{CL}	-	12 17	-	V
Junction Capacitance at $V_R = 0 \text{ V}$, $f = 1 \text{ MHz}$, Any I/O to Gnd at $V_R = 0 \text{ V}$, $f = 1 \text{ MHz}$, Between I/O pins	C_j	-	-	0.6 0.4	pF

¹⁾ Transmission Line Pulse Test (TLP) Settings: $t_p = 100 \text{ ns}$, $t_r = 0.2 \text{ ns}$, I_{TLP} and V_{TLP} averaging window: $t_1 = 70 \text{ ns}$ to $t_2 = 90 \text{ ns}$.



Electrical Characteristic Curves

Fig 1. Pulse Waveform

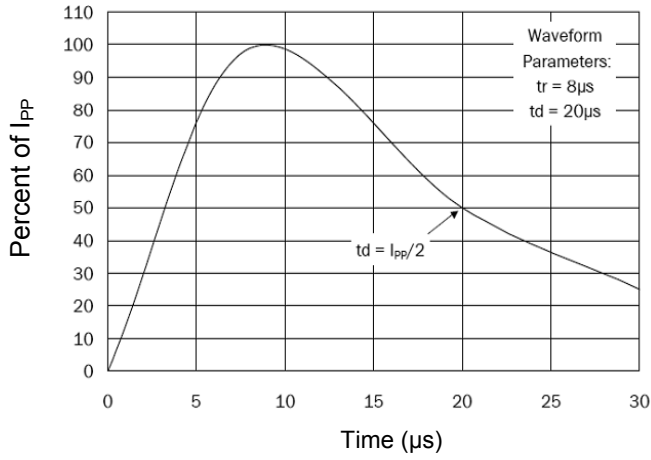


Fig 2. Power Derating Curve

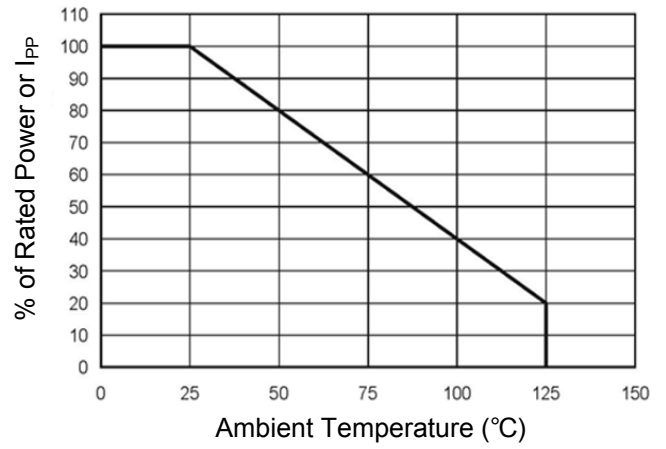


Fig 3. Clamping Voltage Curve

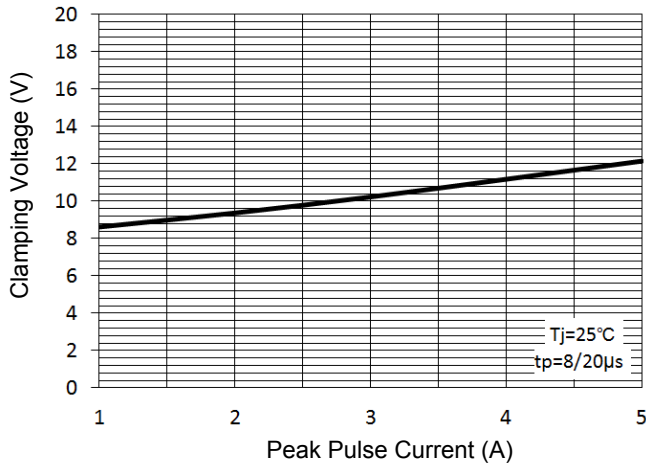


Fig 4. Junction Capacitance

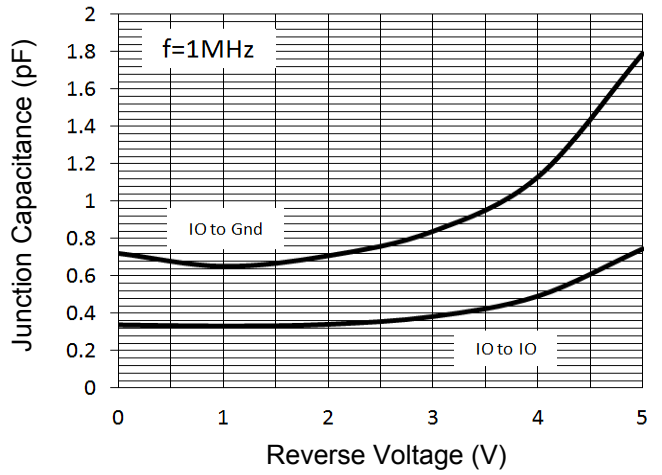
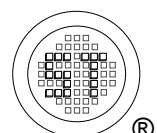
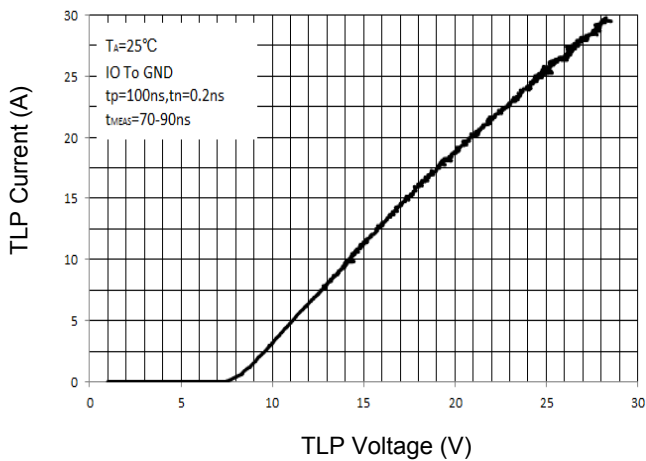


Fig 5 TLP Curve

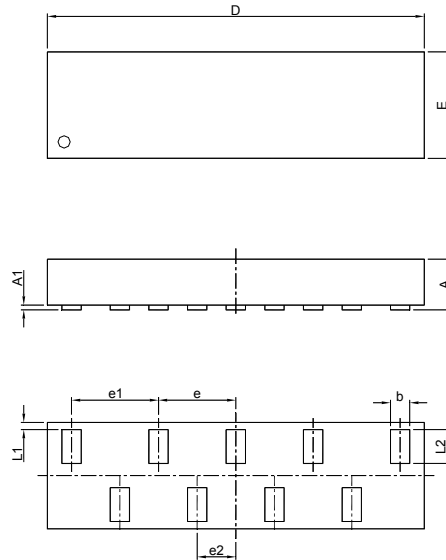


ESDLC7538MP

PACKAGE OUTLINE

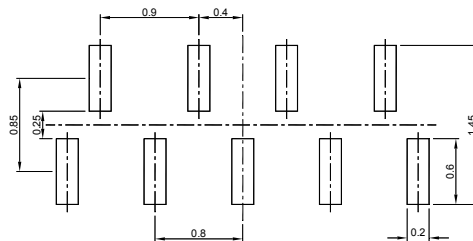
Plastic surface mounted package

DFN3810-9



UNIT	A	A1	b	D	E	e	e1	e2	L1	L2
mm	0.475	0	0.15	3.70	0.90	0.80	0.90	0.40	0.025	0.25
	0.525	0.05	0.25	3.90	1.10				0.075	0.35

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
DFN3810-9	8	4 ± 0.1	0.157 ± 0.004	178	7	5,000

Marking information

- " 7538MP " = Part No.
- " YYWW " = Date Code Marking
- " YY " = Year
- " WW " = Week
- Font type: Arial

