

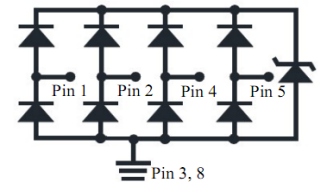
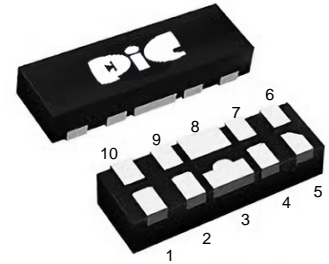
➤ Feature

- Low operating and clamping voltage
- Low Leakage
- Working voltage: 5V

➤ Application

- Digital Visual Interface(DVI)
- High Definition Multi-Media Interface(HDMI)
- Serial ATA
- Desktop and Notebook

➤ DFN2510-10L



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

➤ Maximum Ratings (Rating at 25°C ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Units
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 15	kV
ESD per IEC 61000-4-2 (Contact)		± 10	
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PP}	50	W
Peak Pulse Current ($t_p=8/20\mu s$)	I_{PP}	3.5	A
Operating Temperature Range	T_{OP}	-55 to +85	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

➤ Electrical Characteristics (Rating at 25°C ambient temperature unless otherwise specified)

Parameter	Test Condition	Symbol	Min.	Typ.	Max.	Units
Working Peak Reverse Voltage	-	V_{RWM}	-	-	5.0	V
Punch Through Voltage	$I_R=1mA$	V_{BR}	6.0	-	-	V
Reverse Leakage Current	$V_{RWM}=5V$	I_R	-	-	1.5	μA
Forward Voltage	$I_F=15mA$	V_F	-	-	1.1	V
Clamping Voltage	$I_{PP}=3.5A, t_p=8/20\mu s$	V_C	-	12.9	15.0	V
Clamping Voltage	$I_{PP}=4A, t_p=0.2/100ns$ (TLP)	V_C	-	9.8	-	V
	$I_{PP}=16A, t_p=0.2/100ns$ (TLP)		-	14.9	-	
Dynamic Resistance (Note 1)	-	R_{DYN}	-	0.43	-	Ω
Junction Capacitance	$V_{IN}=2.5V, f=1MHz$	C_J	-	-	0.65	pF

Note:

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

➤ Typical Characteristics

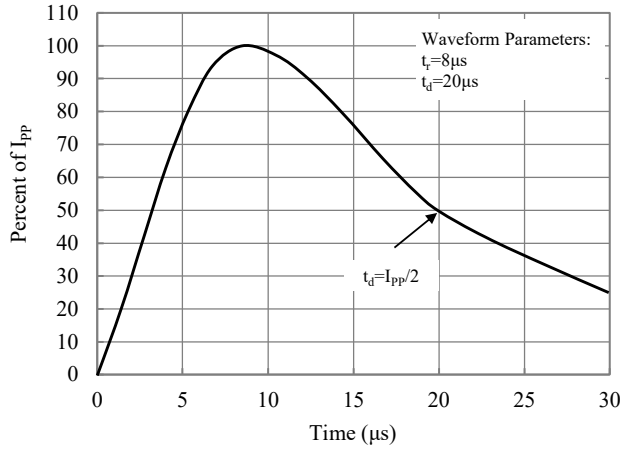


Fig. 1-Pulse Waveform

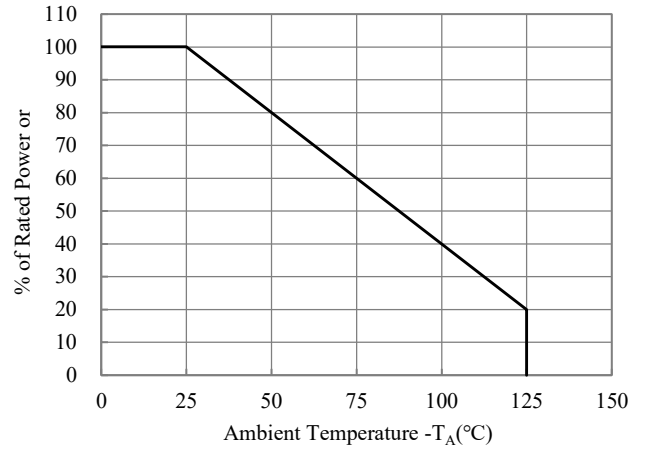


Fig. 2-Power Derating Curve

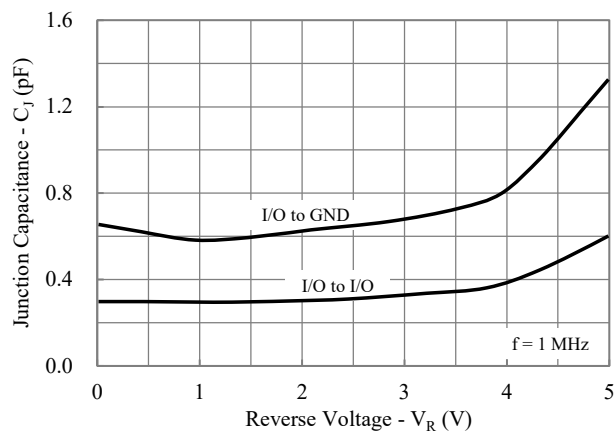


Fig. 3-Junction Capacitance vs. Reverse Voltage

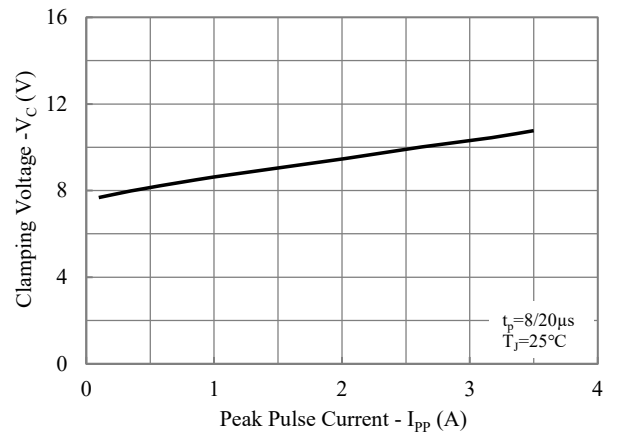


Fig. 4-Clamping Voltage vs. Peak Pulse Current

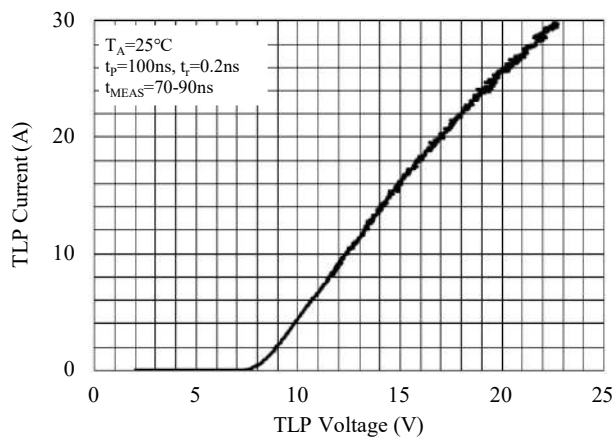
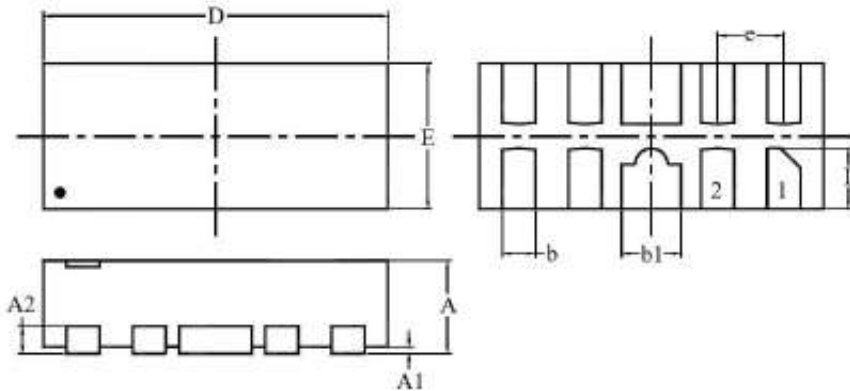


Fig. 5-TLP Characteristic

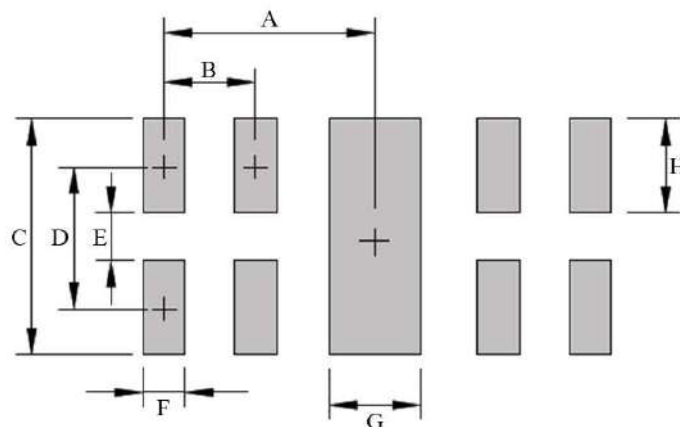
➤ Package Information (DFN2510-10L)

OUTLINE DRAWING AND DIMENSION



Dimensions	Unit (mm)		Unit (inch)	
	MIN.	MAX.	MIN.	MAX.
A	0.460	0.510	0.018	0.020
A1	0.000	0.050	0.000	0.002
A2	0.130		0.005	
b	0.150	0.250	0.006	0.010
b1	0.350	0.450	0.014	0.018
D	2.400	2.600	0.094	0.102
E	0.900	1.100	0.035	0.043
e	0.500		0.020	
L	0.300	0.425	0.012	0.017

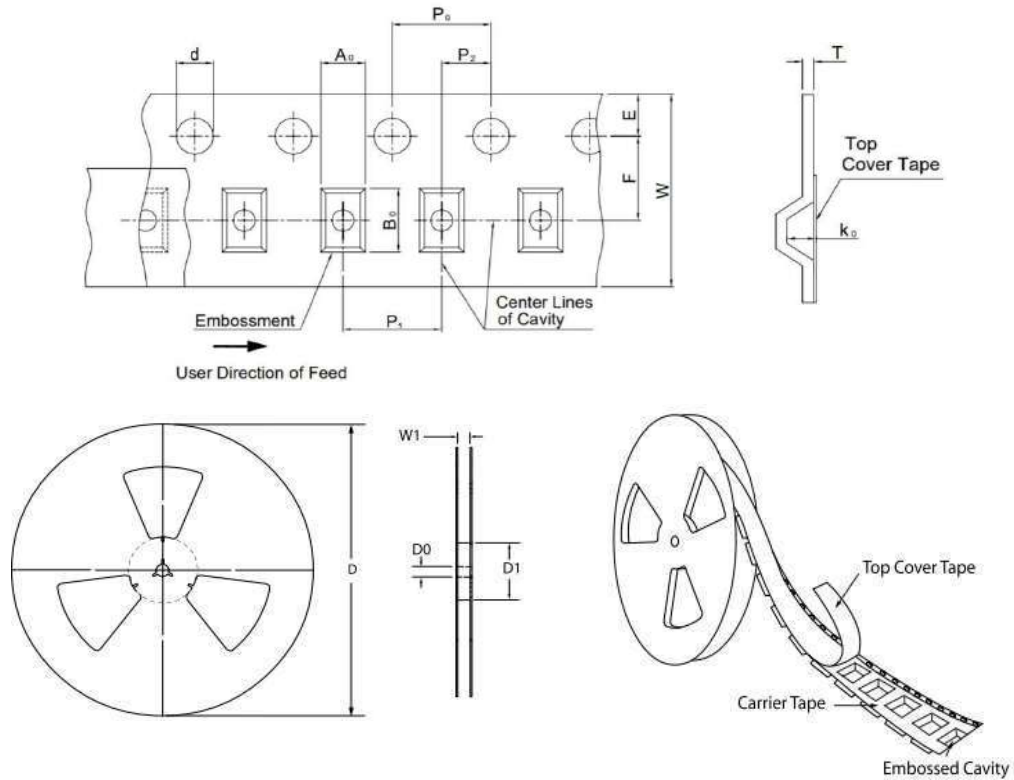
Recommended Pad outline



Unit : mm

PACKAGE	A	B	C	D	E	F	G	H
DFN2510	1.000	0.500	1.550	0.875	0.200	0.200	0.400	0.675

➤ TAPE & REEL SPECIFICATION

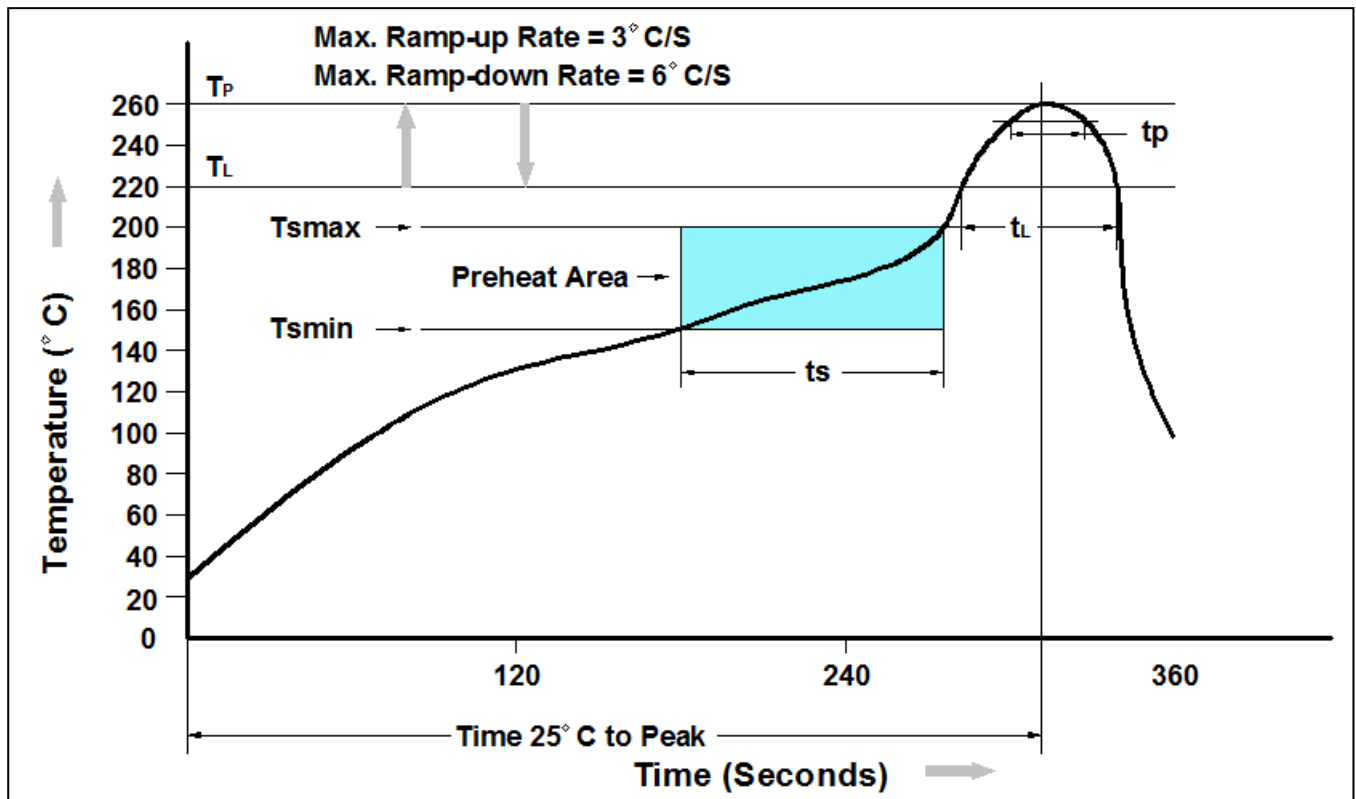


Item	Symbol	DFN2510
Carrier width	A ₀	1.20 ± 0.10
Carrier length	B ₀	2.70 ± 0.10
Carrier depth	K ₀	0.65 ± 0.10
Sprocket hole	d	1.50 ± 0.10
Reel outside diameter	D	178.00 ± 2.00
Feed hole width	D ₀	13.00 ± 0.20
Reel inner diameter	D ₁	MIN. 54.00
Sprocket hole position	E	1.75 ± 0.10
Punch hole position	F	3.50 ± 0.10
Sprocket hole pitch	P ₀	4.00 ± 0.10
Punch hole pitch	P ₁	4.00 ± 0.10
Embossment center	P ₂	2.00 ± 0.10
Overall tape thickness	T	0.20 ± 0.05
Tape width	W	8.00 ± 0.20
Reel width	W ₁	MAX. 13.50

➤ Ordering Information

Part Number	Description	Quantity
PAE05L6ADM	DFN2510-10L Reel	4000 pcs

Recommend IR Reflow Soldering Thermal Profile



Profile Feature	Pb-Free Assembly Profile
Temperature Min. (T _{smin})	150°C
Temperature Max. (T _{smax})	200°C
Time (t _s) from (T _{smin} to T _{smax})	60-120 seconds
Average Ramp-up Rate (t _L to t _P)	3°C/second max.
Liquidous Temperature (T _L)	217°C
Time (t _L) Maintained Above (T _L)	60 – 150 seconds
Peak Temperature	260°C +0°C / -5°C
Time (t _P) within 5°C of actual Peak Temperature	30 seconds
Ramp-down Rate (T _P to T _L)	6°C/second max
Time 25°C to Peak Temperature	8 minutes max.

DISCLAIMER

- The information in this document and any product described herein are subject to change without notice and should not be construed as a commitment by Paceleader, Paceleader reserve the right to make changes to the information in this document.
- Though Paceleader make effort to improve product quality and reliability, Product can malfunction and fail due to their inherent electrical sensitivity and vulnerability to physical stress, it is the responsibility of the customer, when utilizing Paceleader products, to comply with the standards of safety in making a safe design for entire system and to avoid situation in which a malfunction or failure., In developing a new designs, customer should ensure that the device which shown in this documents are used within specified operating ranges.
- The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by Paceleader for any infringements of patents or other rights of the third parties which may result from its use.