

## DFN2510-10L Plastic-Encapsulate ESD Protection Diodes

### Features

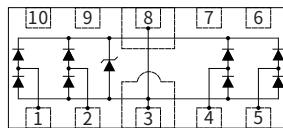
- Low leakage current
- DFN2510-10L surface mount package
- IEC 61000-4-2 (ESD Air):  $\pm 15\text{kV}$
- IEC 61000-4-2 (ESD Contact):  $\pm 8\text{kV}$
- IEC 61000-4-5 (Lightning 8/20 $\mu\text{s}$ ): 5A

### Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation, Digital Cameras
- Peripherals, Audio Players, Industrial Equipment
- Automotive

### Reference News

**Reverse Working Voltage**  
5V Max.  
**Ultra Small capacitance**  
 $C_{I/O-GND}=0.8\text{pF(Max.)}$   
 $C_{I/O-I/O}=0.4\text{pF(Max.)}$

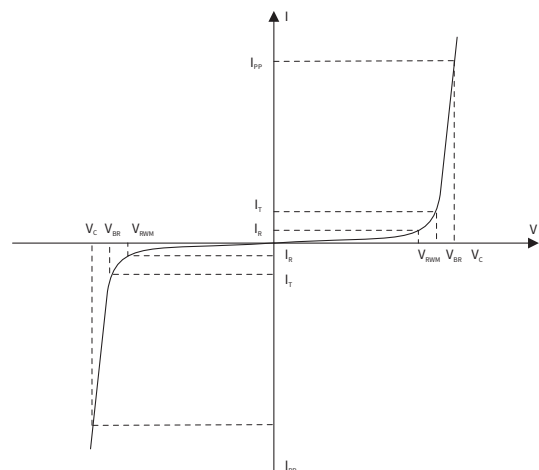


### Maximum Ratings (Ta=25°C Unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{ESD}$	Electrostatic Discharge Voltage	ESD per IEC 61000-4-2( Air )	$\pm 15$	KV
		ESD per IEC 61000-4-2( Contact)	$\pm 8$	KV
$P_{PP}$	Peak Pulse Power	$t_p = 8/20 \mu\text{s}$	75	W
$I_{PP}$	Rated Peak Pulse Current	$t_p = 8/20 \mu\text{s}$	5	A
$T_J$	Operating Junction Temperature Range	—	-55 to +125	°C
$T_{STG}$	Operating Junction Temperature Range	—	-55 to +150	°C

### Electrical Parameter

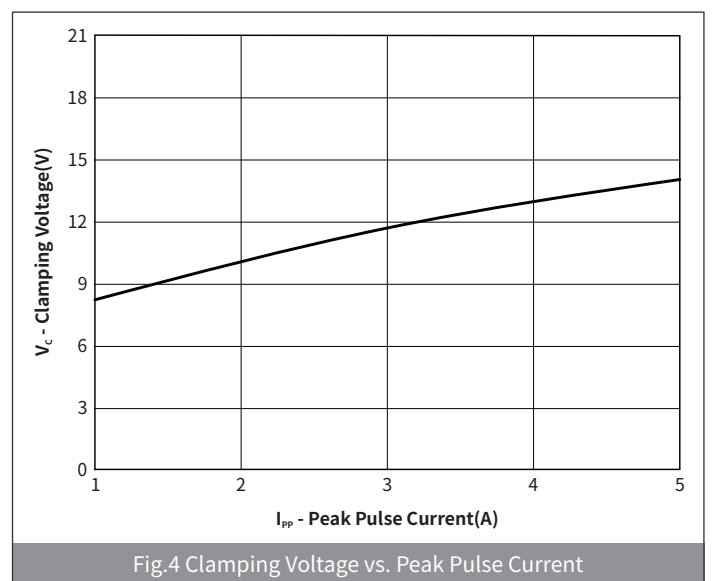
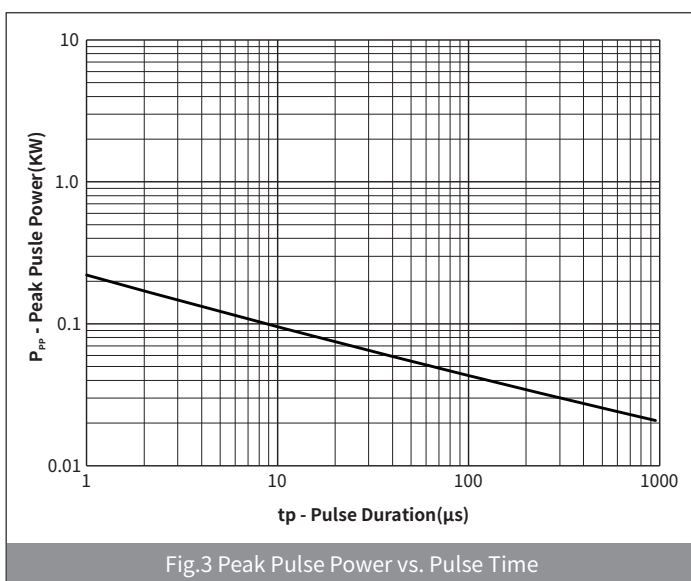
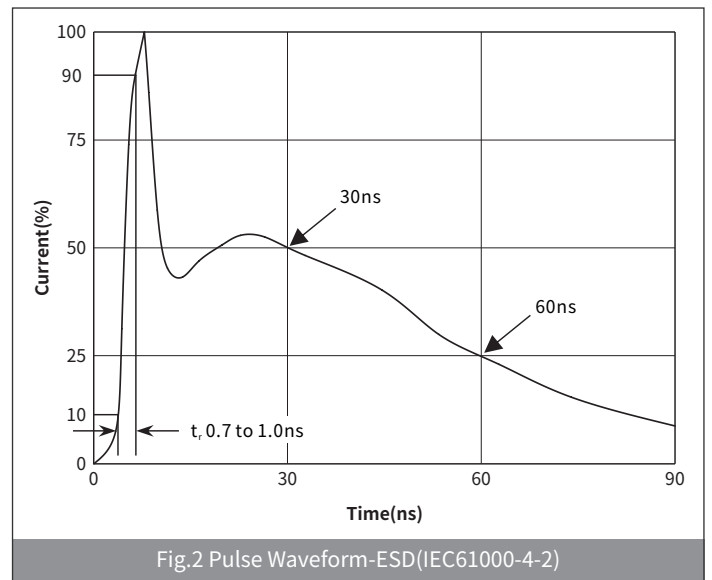
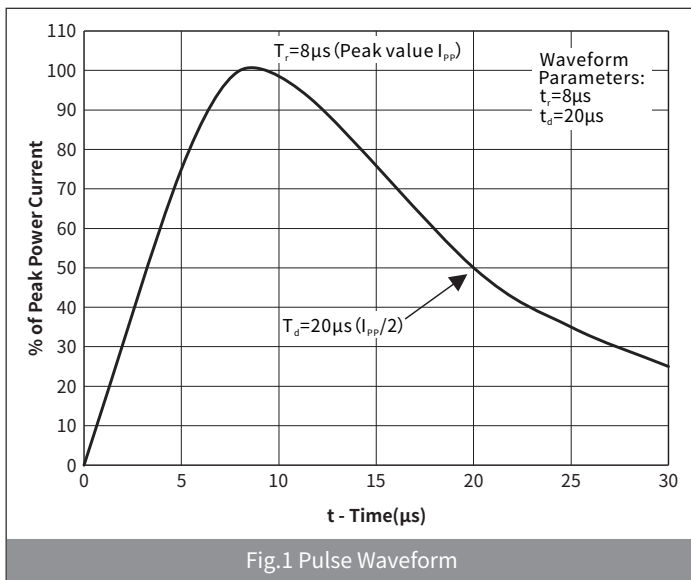
SYMBOL	PARAMETER
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_{PP}$	Peak Pulse Current
$I_T$	Test Current
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{RWM}$	Peak Reverse Working Voltage
$P_{PP}$	Peak Pulse Power Dissipation
$C_J$	Junction Capacitance @ $V_R=0\text{V}, f=1\text{MHz}$
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$



## Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	CONDITION	Min	Typ	Max	UNIT
Peak Reverse Working Voltage	$V_{RWM}$	$T_a=25^\circ\text{C}$	—	—	5	V
Breakdown Voltage	$V_{BR}$	$I_T=1\text{mA}, T_a=25^\circ\text{C}$	6	—	10	V
Reverse Leakage Current	$I_R$	$V_{RWM}=5.0\text{V}, T_a=25^\circ\text{C}$	—	—	1.0	$\mu\text{A}$
Clamping Voltage	$V_C$	$I_{pp}=1\text{A}, t_p=8/20\mu\text{s}, \text{any I/O pin to ground}$	—	—	10	V
		$I_{pp}=5\text{A}, t_p=8/20\mu\text{s}, \text{any I/O pin to ground}$	—	—	15	
Junction Capacitance	$C_J$	$V_R=0\text{V}, f=1\text{MHz}, \text{I/O to I/O}$	—	0.3	0.4	pF
		$V_R=0\text{V}, f=1\text{MHz}, \text{I/O to GND}$	—	—	0.8	

## Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



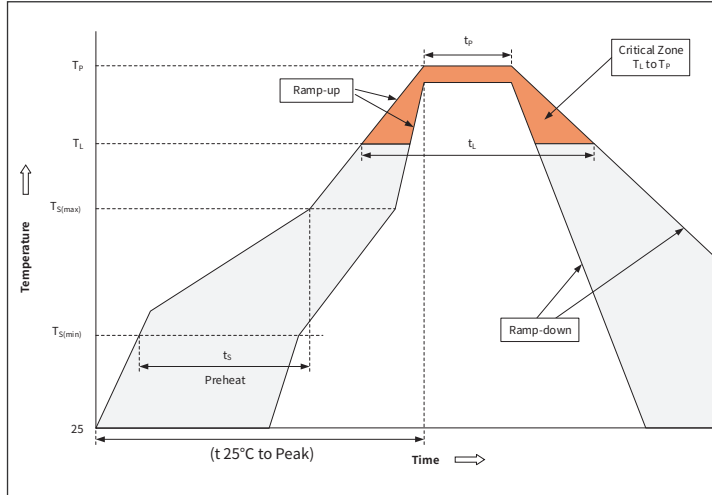
# H5VU25UC

Bi-directional 5V Ultra Small Capacitance ESD

## Ordering Information

PREFERRED P/N	PACKAGE	SIZE(mm)	DELIVERY MODE	MPQ(PCS)
H5VU25UC	DFN2510-10L	2.50×1.00×0.50	7" REEL	3000

## Recommended Soldering Conditions



	Profile Feature	Pb-Free Assembly
Pre-heat	Temperature Min ( $T_{S(min)}$ )	+150°C
	Temperature Max( $T_{S(max)}$ )	+200°C
	Time (Min to Max) ( $t_s$ )	60-180 secs.
Average ramp up rate (Liquid us Temp ( $T_l$ ) to peak)		3°C /sec. Max
$T_{S(max)}$ to $T_L$ - Ramp-up Rate		3°C /sec. Max
Reflow	Temperature( $T_l$ )(Liquid us)	+217°C
	Temperature( $t_l$ )	60-150 secs.
Peak Temp ( $T_p$ )		+260(+0/-5)°C
Time within 5°C of actual Peak Temp ( $t_p$ )		20-40secs
Ramp-down Rate		6°C /sec. Max
Time 25°C to Peak Temp ( $T_p$ )		8 min. Max
Do not exceed		+260°C

## Package Outline Dimensions (DFN2510-10L)

Symbol	Millimeters(mm)		
	Min.	Type.	Max.
D	2.45	2.50	2.55
E	0.95	1.00	1.05
$b_1$	0.35	0.40	0.45
b	0.15	0.20	0.25
L	0.33	0.38	0.43
Nd	2.00 BSC		
e	0.50 BSC		
A	0.45	0.50	0.55
c	0.15 REF		
$A_1$	0.00	-	0.05

Note :

This soldering footprint is for reference purposes only. Please consult your manufacturing group to ensure your PCB design guidelines are met.

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