

### General Description

The PESDALC10N5VU is designed to protect voltage sensitive components from damage or latch-up due to surge current. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to surge current protection for board level. Because of its small size and bi-directional design, it is ideal for use in cellular phones and portable applications that require audio line protection.

### Specification Features

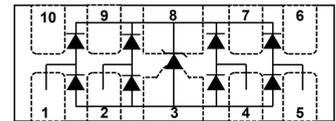
- Miniaturized packaging size suitable for high-density applications
- 4-Channel uni-directional ESD diode
- Standard Capacitance 0.65 pF
- Low Clamping Voltage:  $V_C=15V@I_{PP}=4.5A$
- Reverse Working (Stand-off) Voltage: 5.0V
- Low Leakage current
- Response Time is Typically < 1 ns

### Application

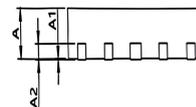
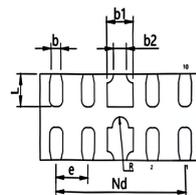
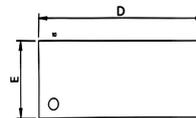
- Smartphones, tablet computers
- Blu-ray and DVD recorders and players
- Video equipment and accessories



DFN2510-10L (Pb-Free)



Schematic Diagram



DFN2510-10L

	Min.(mm)	Typ.(mm)	Max.(mm)
D	2.45	2.50	2.55
E	0.95	1.00	1.05
b1	0.35	0.40	0.45
b2	0.15	0.20	0.25
b	0.10	0.15	0.20
L	0.33	0.38	0.43
Nd	2.00bsc		
e	0.59bsc		
R	0.125bsc		
A	0.45	0.50	0.55
A1	0.152ref		
A2	-	0	0.05

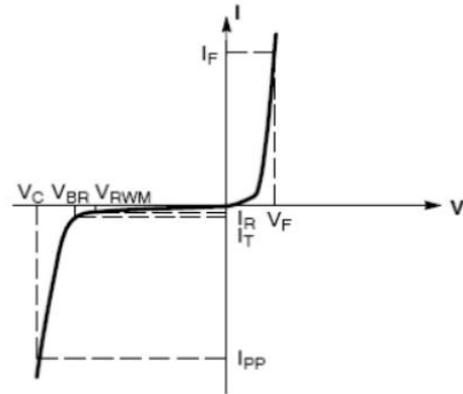
### Absolute Maximum Rating

Rating	Symbol	Value	Unit
Peak pulse power ( $t_p = 8/20\mu s$ )	$P_{PK}$	90	W
ESD according to IEC61000-4-2 air discharge	$V_{ESD}$	$\pm 20$	kV
ESD according to IEC61000-4-2 contact discharge		$\pm 20$	
Operating Temperature Range	$T_J$	-55~125	$^{\circ}C$
Storage temperature	$T_{STG}$	-55~150	$^{\circ}C$

# PESDALC10N5VU

## Characteristics( $T_J = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$
$I_T$	Test Current
$V_{BR}$	Breakdown Voltage @ $I_T$
$P_{PK}$	Peak Power Dissipation
$C$	Max. Capacitance @ $V_R = 0$ and freq.=1 MHz



Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	$V_{RW}$				5.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1\text{mA}$	6.0			V
Forward Voltage	$V_F$	$I_F=15\text{mA}$			1.2	V
Reverse Leakage Current	$I_R$	$V_{RWM}=5.0\text{V}$			100	nA
Clamping Voltage	$V_C$	$I_{PP}=1.0\text{A}$ , $t_p=8/20\text{us}$			10	V
Clamping Voltage	$V_C$	$I_{PP}=4.5\text{A}$ , $t_p=8/20\text{us}$			15	V
Junction Capacitance	$C_J$	$V_R=0\text{V}$ , $f=1\text{MHz}$ , Any I/O to Ground		0.45	0.65	pF
Junction Capacitance	$C_J$	$V_R=0\text{V}$ , $f=1\text{MHz}$ , between I/O pins		0.25	0.35	pF