

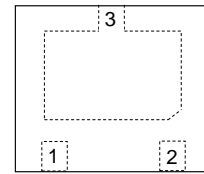
## Features

- 5500W peak pulse power ( $t_p = 8/20\mu s$ )
- DFN2\*2-3L package
- Fast response time, typically  $< 1\text{ ns}$
- Excellent clamping voltage
- Low leakage current
- IEC 61000-4-2  $\pm 30\text{kV}$  (Air) ESD protection
- IEC 61000-4-2  $\pm 30\text{kV}$  (Contact) ESD protection
- IEC 61000-4-5 190A (8/20us) SURGE protection
- IEC 61000-4-4 40A (5/50ns) EFT protection
- RoHS compliant

## Applications

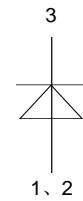
- USB Vbus
- Power Line
- Power Management

## SESHC12VD2020-3U



Top View

### DFN2\*2-3L



Schematic Diagram

## Absolute Maximum Ratings

( $T_A = 25^\circ\text{C}$ , Unless otherwise specified.)

Rating	Symbols	Value	Units
Peak Pulse Power ( $T_P = 8/20\mu s$ )	$P_{PP}$	5500	W
Peak Pulse Current ( $T_P = 8/20\mu s$ )	$I_{PP}$	190	A
Operating Temperature	$T_J$	-55 to +150	$^\circ\text{C}$
Storage temperature	$T_{STG}$	-55 to +150	$^\circ\text{C}$

## Electrical Characteristics

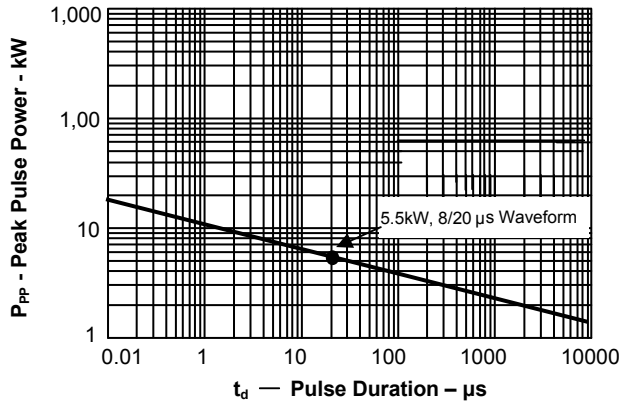
( $T_A = 25^\circ\text{C}$ , Unless otherwise specified.)

Parameter	Symbols	Conditions	Min	Typ	Max	Units
Reverse stand-off voltage	$V_{RWM}$				12	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1\text{mA}$	13.3			V
Reverse Leakage Current	$I_R$	$V_R = 12\text{V}$			1.0	$\mu\text{A}$
Clamping Voltage <sup>(1)</sup>	$V_C$	$I_{PP} = 190\text{A}$		25		V
Junction Capacitance	$C_J$	$V_R = 0\text{V}, f = 1\text{MHz}$		1500		pF

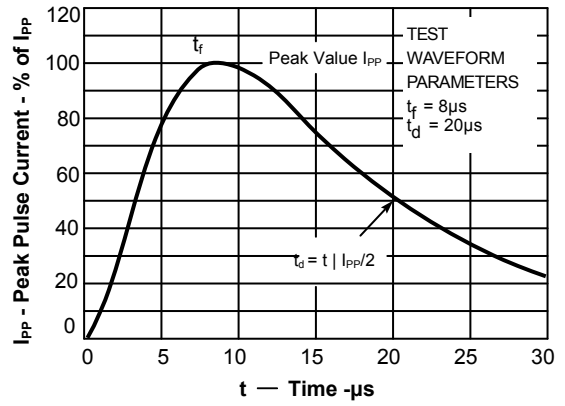
Note1: IEC61000-4-5

## Typical Characteristic Curves

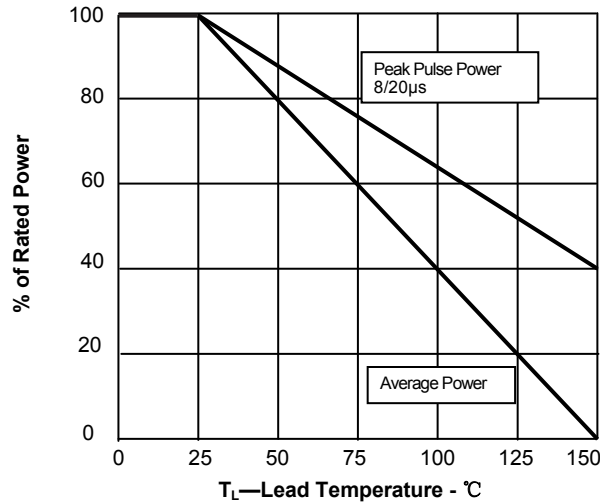
**Fig.1 Peak Pulse Power vs Pulse Time**



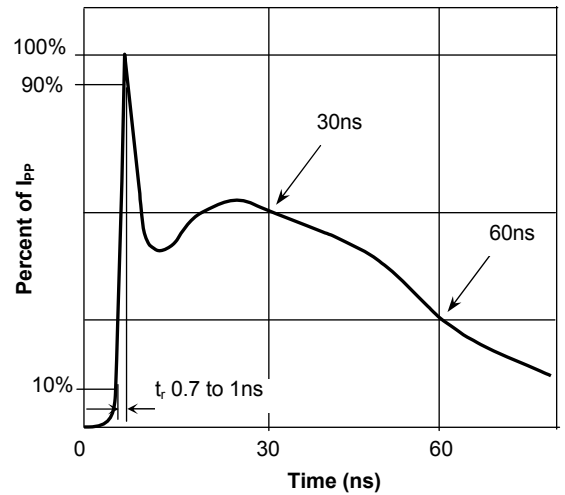
**Fig.2 Pulse WaveForm-8/20μs**



**Fig.3 Power Derating Curve**

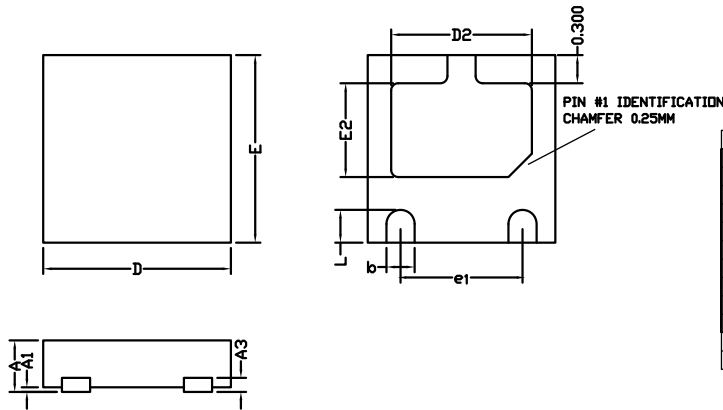


**Fig.4 Pulse Waveform-ESD(IEC61000-4-2)**



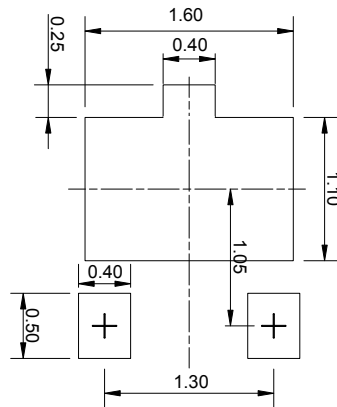
ESD/Surge Protection Diode

## Product Dimensions



PKG. REF.	COMMON DIMENSIONS(MM)		
	MIN.	NOM.	MAX.
A	0.50	0.55	0.60
A1	0.00	-	0.05
A3	0.15 REF.		
D	1.95	2.00	2.05
E	1.95	2.00	2.05
b	0.25	0.30	0.35
L	0.30	0.35	0.40
D2	1.35	1.50	1.60
E2	0.85	1.00	1.10
e1	1.30 BSC		

### PAD Dimensions



### Marking



### Order Information

Device	Package	Package	Quantity	Quantity
SESHC12VD2020-3U	DFN2*2-3L	Tape & Reel	3000pcs/reel	RoHS compliant

### Revision history

Date	Revision	Description of changes
12-May-2017	A0	First Issue

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