

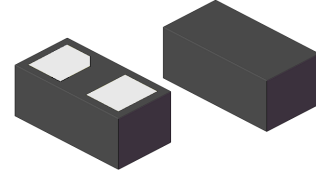
## Features

- 150Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Tiny DFN0603 package
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Medium capacitance ( $C_J=5pF$  max.)
- Protection one data/power line to:
  - IEC 61000-4-2  $\pm 30kV$  contact  $\pm 30kV$  air
  - IEC 61000-4-4 (EFT) 40A (5/50ns)
  - IEC 61000-4-5 (Lightning) 5.5A (8/20 $\mu s$ )
- RoHS compliant

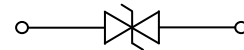
## Applications

- Audio Line, Speaker, Headset, Microphone Protection
- Human Interface Devices (Keyboard, Touchpad, Buttons)

## SES12VD0603-2B



DFN0603



Schematic Diagram

## Absolute Maximum Ratings

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

Parameter	Symbol	Value	Unit
Peak Pulse Power ( $T_p=8/20\mu s$ )	$P_{PP}$	150	W
ESD contact/air discharge (IEC-61000-4-2)	$V_{ESD}$	30	kV
Peak Pulse Current ( $t_p = 8/20\mu s$ )	$I_{PP}$	5.5	A
Junction Temperature	$T_J$	-55 to +125	$^\circ C$
Storage temperature	$T_{STG}$	-55 to +150	$^\circ C$

## Electrical Characteristics

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

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	$V_{RWM}$				12	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	13.4			V
Reverse Leakage Current	$I_R$	$V_R=12V$			200	nA
Clamping Voltage (IEC 61000-4-5)	$V_C$	$I_{PP}=1A$		17	20	V
		$I_{PP}=5.5A$		23	26	V
Junction Capacitance	$C_J$	$V_R=0V, f=1MHz$		3.5	5	pF

## Typical Characteristic Curves

Fig.1 Peak Pulse Power Rating Curve

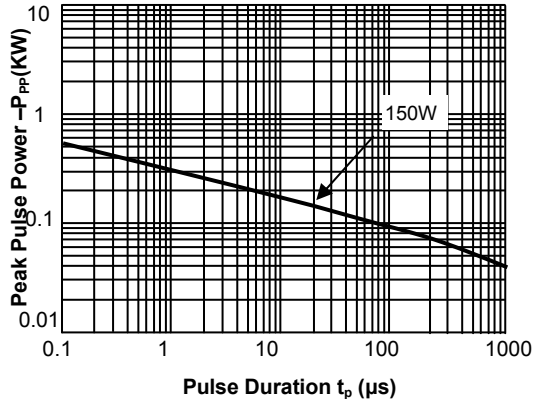


Fig.2 Pulse Derating Curve

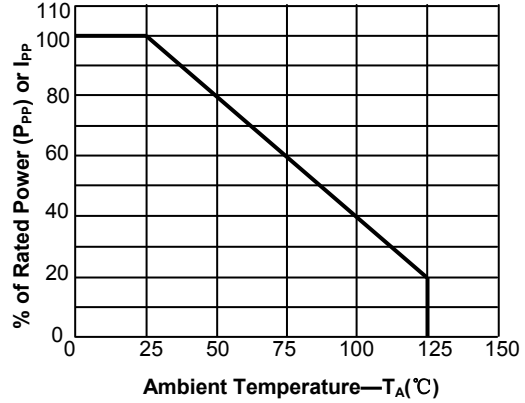


Fig.3 Pulse Waveform-8/20μs

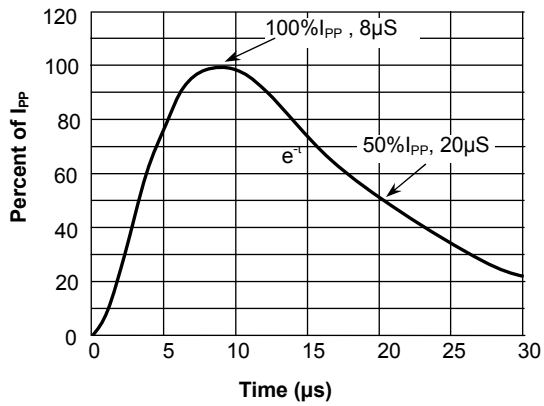
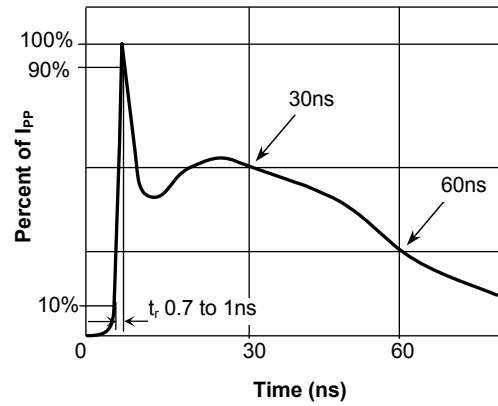
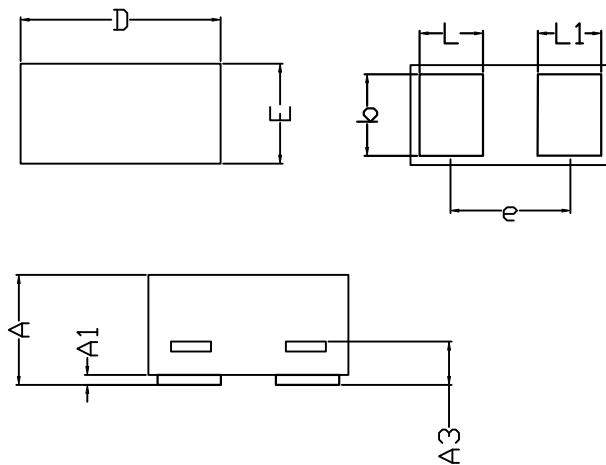


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

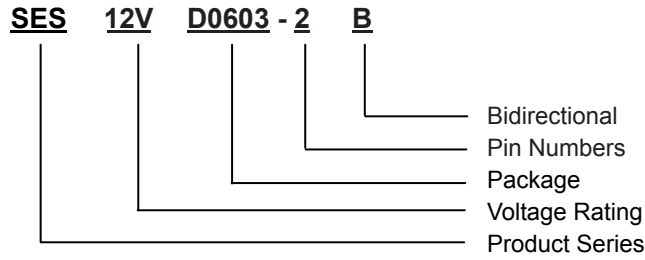


## Product Dimensions

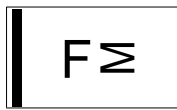


Symbol	Dimensions in millimeters		
	Min	Nom	Max
A	0.23	-	0.33
A1	0.00	-	0.05
A3	0.102 REF		
D	0.55	0.60	0.65
E	0.25	0.30	0.35
b	0.215	0.245	0.275
L	0.13	0.18	0.23
L1	0.13	0.18	0.23
e	0.355 BSC		

## Part Number System



## Marking



F: Specific Device Code  
 M: Month Code

## Order Information

Device	Package	Carrier	Quantity	HSF Status
SES12VD0603-2B	DFN0603	Tape & Reel	15000pcs / Reel	RoHS compliant

## Revision history


Date	Revision	Description of changes
12-April-2015	A0	First issue
13-May-2019	A1	Update

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