Elektronische Bauelemente

SESD12

220W, 12V

Uni-direction ESD Protection Diode

RoHS Compliant Product

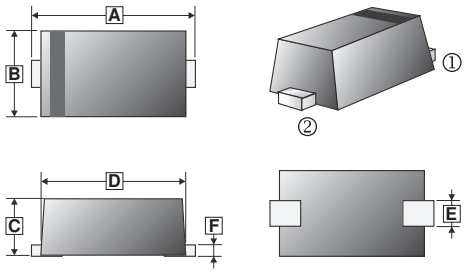
A suffix of “-C” specifies halogen and lead-free

DESCRIPTION

Designed to protect voltage sensitive electronic components from ESD and other transients. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to ESD.

The combination of small size, high level of ESD protection makes them a flexible solution for applications such as Digital cameras,cellular phones, and MP3 Players. It is designed to replace multiplayer varistors (MLV) in consumer equipments applications such as mobile phone, notebook, PAD, STB, LCD TV etc.

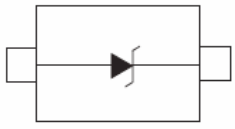
SOD-723



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.300	1.500	D	0.800	1.100
B	0.550	0.650	E	0.250	0.350
C	0.515	0.650	F	0.080	0.150

FEATURES

- Uni-Directional ESD Protection of One Lines
- Reverse Stand−off Voltage: 12V
- Low Reverse Clamping Voltage
- Low Leakage Current
- Fast Response Time
- JESD22-A114-B ESD Rating of Class 3B per Human Body Model
- IEC 61000-4-2 Level 4 ESD Protection



Uni-direction

APPLICATIONS

- Computers and Peripherals
- Digital Cameras
- Audio and Video Equipment
- Cellular Handsets and Accessories
- Portable electronics
- Mp3 Players
- Other Electronics Equipments Communication Systems

MARKING

E3

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-723	8K	7 inch

ORDER INFORMATION

Part Number	Type
SESD12	Lead (Pb)-free
SESD12-C	Lead (Pb)-free and Halogen-free

ABSOLUTE MAXIMUM RATINGS (T_A=25℃ unless otherwise specified)

Parameter		Symbol	Limit	Unit
IEC 61000-4-2 ESD Voltage	Air Model	V_{ESD} [1]	±25	kV
	Contact Model		±25	
JESD22-A114-B ESD Voltage	Per Human Body Model		±16	
ESD Voltage	Machine Model		±0.4	
Peak Pulse Power [2]		P_{PP}	220	W
Peak Pulse Current [2]		I_{PP}	9	A
Lead Solder Temperature−Maximum(10Sec. Duration)		T_L	260	℃
Operating and Storage Temperature Range		T_J ,T_{STG}	150, -55~150	℃

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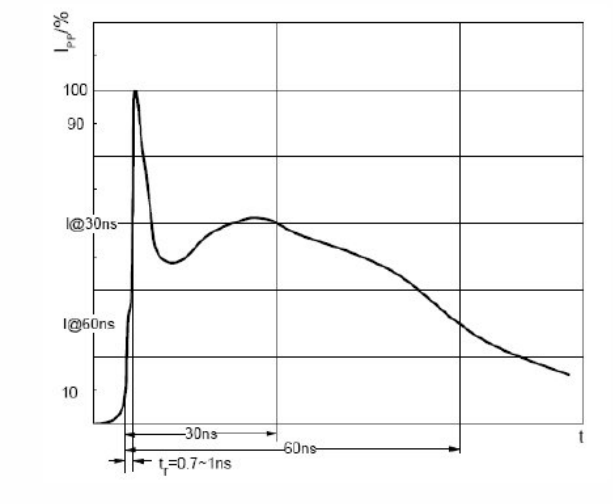
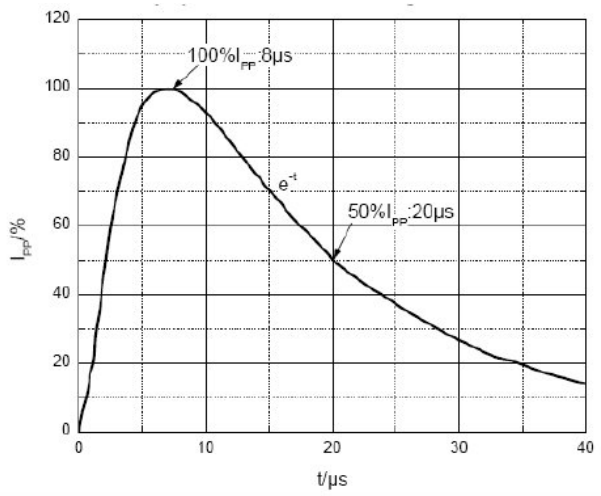
ESD STANDARDS COMPLIANCE

IEC61000-4-2 Standard			
Contact Discharge		Air Discharge	
Level	Test Voltage kV	Level	Test Voltage kV
1	2	1	2
2	4	2	4
3	6	3	8
4	8	4	15

JESD22-A114-B Standard	
ESD Class	Human Body Discharge V
0	0~249
1A	250~499
1B	500~999
1C	1000~1999
2	2000~3999
3A	4000~7999
3B	8000~15999



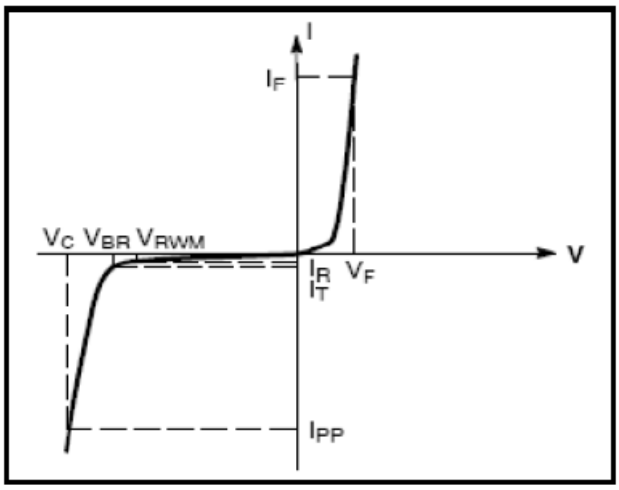
ESD pulse waveform according to IEC61000-4-2



8/20μs pulse waveform according to IEC 61000-4-5

ELECTRICAL PARAMETER

Symbol	Parameter
V_C	Clamping Voltage @I_{PP}
I_{PP}	Peak Pulse Current
V_{BR}	Breakdown Voltage @I_T
I_T	Test Current
I_R	Reverse Leakage Current @V_{RWM}
V_{RWM}	Reverse Standoff Voltage
V_F	Forward Voltage @I_F
I_F	Forward Current



V-I characteristics for a uni-directional TVS

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ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Reverse Stand−off Voltage [3]	V_{RWM}	-	-	12	V	
Reverse Leakage Current	I_R	-	-	1	μA	V_{RWM}=12V
Breakdown Voltage	V_{BR}	13.5	-	16.5	V	I_T=1mA
Clamping Voltage [2]	V_C	-	-	24	V	I_{PP}=9A
Forward Voltage	V_F	-	-	0.9	V	I_F=10mA
Junction Capacitance	C_J	-	45	-	pF	V_R=0, f=1MHz

Notes:

1. Device stressed with ten non-repetitive ESD pulses.
2. Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5.
3. Other voltages available upon request.

RATINGS AND CHARACTERISTICS CURVES