

## APPROVAL DRAWING

Surge Components product name
SES5VD523-2U TR (RoHS compliant)

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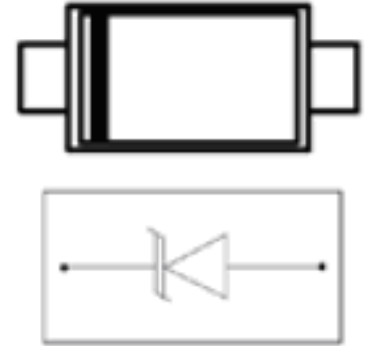
Customer Acknowledgement
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Surge Components, Inc.

Manufacturer Surge Components, Inc.
2009-05-06

## 1.. FEATURE

- 200 Watts peak pulse power per line (tp=8/20us)
- SOD-523 package
- Replacement for MLV (0603)
- Unidirectional configurations
- Response Time is Typically<1ns
- ESD protection>40kV
- Low clamping voltage
- RoHS compliant
- Transient protection for data lines to IEC 61000-4-2(ESD) ±15KV(air),±8KV(contact); IEC 61000-4-4(EFT) 40A(5/50ns)



## 2. APPLICATION

- Portable devices
- Cellular phones
- Digital cameras
- Power supplies

## 3. ELECTRICAL CHARACTERISTICS PER LINE@25°C(UNLESS OTHERWISE SPECIFIED)

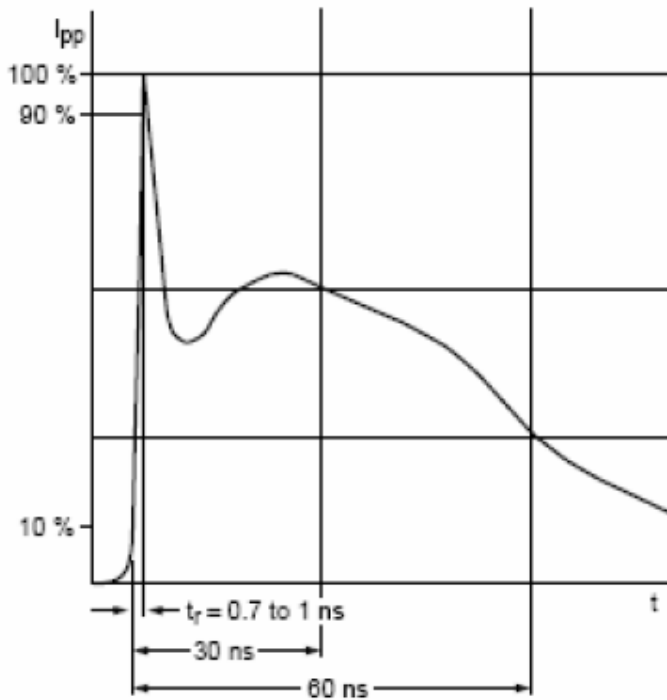
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse stand-off voltage	$V_{RWM}$				5	V
Reverse Breakdown voltage	$V_{BR}$	$I_t = 1mA$	6.2			V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5V$ $T = 25^\circ C$			0.05	$\mu A$
Clamping Voltage	$V_C$	$I_{PP} = 1A$ $t_p = 8/20\mu s$			8.0	V
Clamping Voltage	$V_C$	$I_{PP} = 5A$ $t_p = 8/20\mu s$			10.0	
Clamping Voltage	$V_C$	$I_{PP} = 15A$ $t_p = 8/20\mu s$			15.0	V
Junction Capacitance	$C_j$	$V_R = 0V$ , $f = 1MHz$		100		pF

#### 4. ABSOLUTE MAXIMUM RATING @25°C

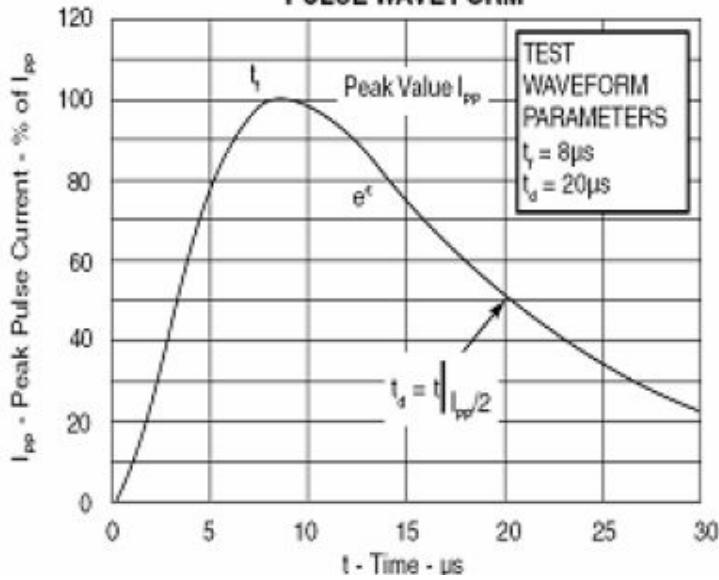
Rating	Symbol	Value	Units
Unidirectional Peak Pulse Power( $t_p=8/20\mu s$ )	$P_{PP}$	200	W
Operating Temperature	$T_j$	-55 to +150	°C
Storage Temperature	$T_{STG}$	-55 to +150	°C

#### 5. TYPICAL CHARACTERISTICS

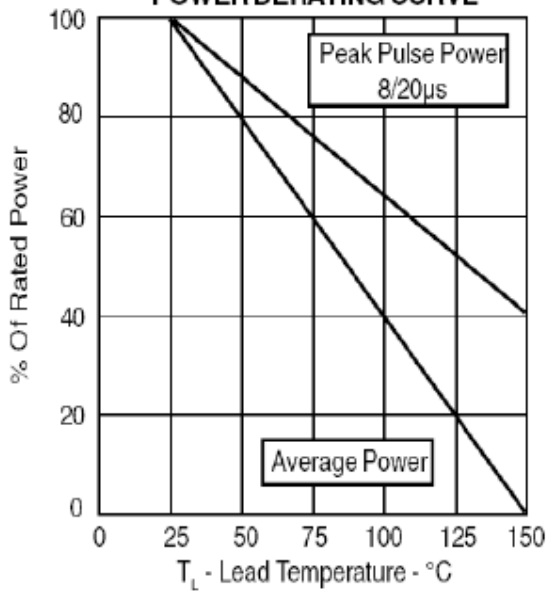
**FIGURE 1**  
**ESD PULSE WAVEFORM ACCORDING TO IEC 61000-4-2**



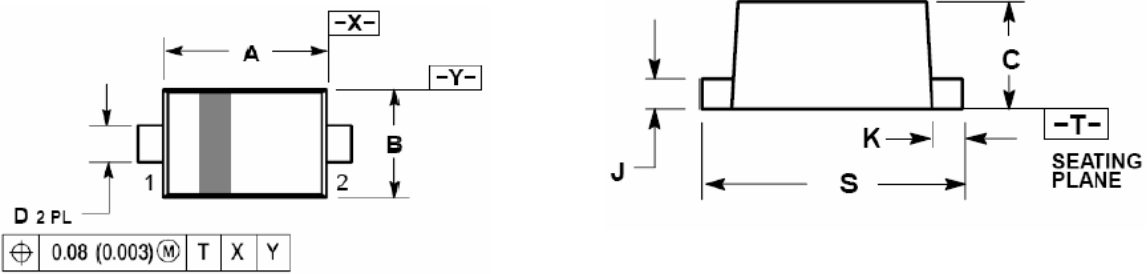
**FIGURE 2  
PULSE WAVE FORM**



**FIGURE 3  
POWER DERATING CURVE**



**6. PRODUCT DIMENSION**



Dim	Millimeters			Inches		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.10	1.20	1.30	0.043	0.047	0.051
B	0.70	0.80	0.90	0.028	0.032	0.035
C	0.50	0.60	0.70	0.020	0.024	0.028
D	0.25	0.30	0.35	0.010	0.012	0.014
J	0.07	0.14	0.20	0.0028	0.0055	0.0079
K	0.15	0.20	0.25	0.006	0.008	0.010
S	1.50	1.60	1.70	0.059	0.063	0.067