

# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



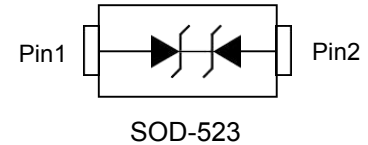
PLED

Product data sheet

[www.msksemi.com](http://www.msksemi.com)

## Feature

- 80W peak pulse power per line ( $t_p = 8/20\mu s$ )
- SOD-523 package
- Replacement for MLV(0603)
- Bidirectional configurations
- Protects one power or I/O port
- Low clamping voltage
- RoHS compliant
- Transient protection for data lines to IEC 61000-4-2(ESD)  
 $\pm 30kV$ (air),  $\pm 30kV$ (contact); IEC 61000-4-4 (EFT) 40A (5/50ns)



## Applications

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

## Mechanical Characteristics

- Lead finish: 100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature: 260°C
- Device meets MSL 1 requirements
- Pure tin plating: 7 ~ 17  $\mu m$
- Pin flatness:  $\leq 3mil$

### Electrical characteristics per line@25?( unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Peak Reverse Working Voltage	$V_{RWM}$			3.3		V
Breakdown Voltage	$V_{BR}$	$I_T = 1mA$	4.8		6.8	V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5V$ $T = 25^\circ C$			1.0	$\mu A$
Clamping Voltage <sup>1)</sup>	$V_C$	$TLP = 16A$ , $t_p = 100ns$		9.0		V
Dynamic resistance <sup>1)</sup>	$R_{DYN}$			0.15		$\Omega$
Clamping Voltage <sup>2)</sup>	$V_C$	$I_{PP} = 10A$		8	10	V
Junction Capacitance	$C_J$	$V_R = 0V$ $f = 1MHz$		33		pF

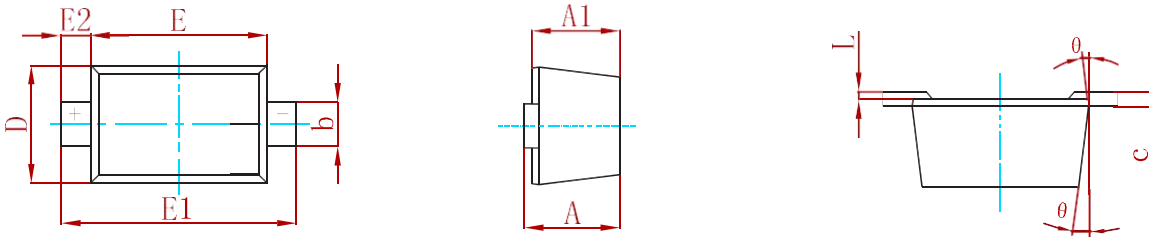
Notes:

1. TLP parameter:  $Z_0 = 50\Omega$ ,  $t_p = 100ns$ ,  $t_r = 2ns$ , averaging window from 60ns to 80ns.  $R_{DYN}$  is calculated from 4A to 16A.
2. Non-repetitive current pulse, according to IEC61000-4-5.

### Absolute maximum rating@25?

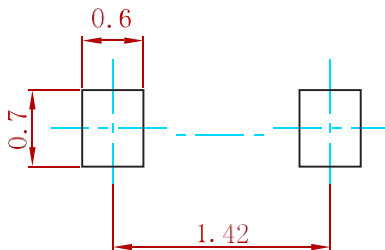
Rating	Symbol	Value	Unit
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{pp}$	80	W
Operating Temperature	$T_J$	-55 to +150	$^\circ C$
Storage Temperature	$T_{STG}$	-55 to +150	$^\circ C$

**PACKAGE MECHANICAL DATA**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
θ	7° REF		7° REF	

**Suggested Pad Layout**



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05mm.
3. The pad layout is for reference purposes only.

**REEL SPECIFICATION**

P/N	PKG	QTY
AZ5123-01H-MS	SOD-523	3000

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